

USING THE THREAT INDEX TO PREDICT DEATH ANXIETY, SENSE
OF PURPOSE, AND PERFORMANCE OF HOSPICE VOLUNTEER PERSONNEL

By

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The present investigation examined the efficacy of using the Threat Index to predict the death anxiety, purpose-in-life, and caregiver performance in a sample of 144 hospice and non-hospice volunteer personnel. This study proposed that Threat Index scores could be usefully employed to screen and evaluate hospice volunteers.

The results of the first hypothesis indicated that the two primary Threat Index scores (TI-actualization, TI-death threat) could be used to predict subsequent Death Anxiety Scale and Purpose-in-Life Test scores in the global sample of 144 hospice trainees, experienced hospice volunteers, and non-hospice volunteers. Two of the significant correlations had modest predictive power. The third significant

correlation indicated that TI-actualization scores were especially good predictors of Purpose-in Life scores.

The results of the second hypothesis indicated that none of the scores based on the three tests could differentiate the hospice trainees from the non-hospice volunteers. The results of the third hypothesis indicated that neither of the two primary Threat Index scores (TI-actualization, TI-death threat) was significantly related to the performance ratings of experienced hospice volunteers, although one supplemental Threat Index score was a powerful predictor of volunteer performance ratings.

The current investigation raised questions concerning the feasibility and relevance of using only primary Threat Index scores in a population of hospice volunteers. Clearly factors other than those measured by the Threat Index are important in the screening and evaluation of hospice volunteers.

CHAPTER I INTRODUCTION

Hospice Volunteers

Hospice programs in the United States have served the multifaceted needs of the terminally ill and their families since 1974 (Knecht, 1980) and volunteers have played an increasingly important role in hospice's dramatic growth. Begun as a grassroots reaction against institutionalized medical care (Finn Paradis & Cummings, 1986; Longest, 1980), hospice has quickly expanded nationwide and has, itself, become a somewhat "bureaucratic" structure (Russell, 1989).

Because of its phenomenal growth, hospice has attracted government attention in the form of federal regulations and Congressional acts (Bayer & Feldman, 1982; Knecht, 1980). In fact the 1983 Medicare reimbursement guidelines required hospice to utilize volunteers as part of a patient's interdisciplinary team (Mantell & Ell, 1985). Despite the regulations and federal mandates, hospice strives to provide individualized care and seeks to "maximize a comfortable fit between dying persons and their physical and social environments" (Mantell & Ell, 1985, pp. 86-87).

This "interactional" perspective is consistent with the research that demonstrates that individual health and life-

stress adaptation are enhanced through social support (Steele, 1990; Ferrell, 1985; Ell, 1984; Rando, 1984; Gottlieb, 1983). The volunteer's role in hospice is to be supportive of patients and families within their own environment and to provide the foundation from which other, professionally provided, hospice services come.

Because of the emotional demands inherent in assisting dying patients and their families, hospice volunteers require substantial screening and training prior to interacting with patients. The costs incurred by hospice in training volunteers mandate that volunteers remain active in hospice for an extended period of time (Silbert, 1985).

Hospice administrators have a stake in seeing that their volunteers both help terminally-ill patients and their families and receive significant satisfaction for the work that they do. Surprisingly, with over 1600 hospice programs in this country (Mor, 1987), relatively few empirical studies have been conducted on hospice programs in general or on hospice volunteers in particular.

Volunteers are increasingly performing a wide variety of duties in their roles at hospice, ranging from assisting with household chores and daily living tasks to taking part in recreational activities to counseling patients and their families (Magnusen Hughes, 1988; De Vries, 1983). Considering the intense and stressful nature of these emotionally charged hospice relationships, it seems

beneficial to more closely explore the feelings and attitudes of this population of health-care providers.

Loneliness, depression, anxiety, and fear are recurrent themes in the literature on death and dying (Downe-Wamboldt & Ellerton, 1986; Smith & Bohnet, 1983; Dupee, 1982; Davidson, 1979), yet these themes have been investigated primarily from the patient's point of view. Few empirical studies have explored whether these or any other symptoms are present in the volunteers who work at hospice.

According to Krant (1979), terminally ill patients symbolize death, a universally feared concept. Perhaps because of this phenomenon, dying patients are typically ignored and ostracized by friends, medical staff, and clergy (Price & Higgins, 1985; Telban, 1981; Feifel, 1969). Fear of abandonment has long been shown to be a salient concern of those who are dying (Davidson, 1979; Kubler-Ross, 1969).

Indeed, a sizable amount of research has shown death anxiety to contribute negatively to the care provided by doctors and nurses (Field & Howells, 1988; Eakes, 1985; Stoller, 1980-81). If these negative reactions to seriously ill patients occur because of death anxiety, to what extent are hospice volunteers able to combat their own fears and function effectively in their roles as caregivers? One might hypothesize that excessive levels of death anxiety in volunteers would negatively influence the care that they are able to provide hospice patients.

Frequently described as "the backbone" of any hospice, volunteers provide immeasurable support for patients and families (Dush, 1988; Finn Paradis & Usui, 1987; Kavanaugh, 1983; Mor & Laliberte, 1983). Given the increasing recognition that hospice volunteers have received, both by medical and governmental bodies, anything which might detract from, or be predictive of, their effectiveness as caregivers would seem to be worthy of investigation.

Thanatological Research

Death anxiety is a frequently debated concept whose origins lie in the psychoanalytic notions of Freud (1926), Rank (1912), and Stekel (1908). Phobic reactions and cultural sublimation are two of the earliest theorized responses to anxiety resulting from death and dying. More recently, death anxiety has sparked interest from researchers and has been studied quite extensively in the literatures of psychology, medicine, and education. Not satisfied with the nebulous "analytic" notions of earlier theorists, later investigators devised instruments in an attempt to operationalize death anxiety.

As the number of instruments measuring death "concerns" increased (i.e., Bugen's Coping with Death Scale, 1980-1981; Krieger, Epting, and Leitner's Threat Index, 1974; Templer's Death Anxiety Scale, 1970; the Collett-Lester Fear of Death Scale, 1969), an empirical basis was found for the long asserted claims of analytic writers. Consistent with the

writings of early theorists, people did seem to have fears and worries surrounding death. However, many tests frequently exhibited only moderate correlations with each other and some authors have suggested that significant methodological problems continue to plague attempts to measure death anxiety (Vargo, 1980; Dickstein, 1972).

With the continued diversity of death anxiety measures, it is now generally recognized that this concept is much more complex than was originally conceived. Death anxiety is currently conceptualized to be a multi-, rather than a unidimensional concept (Rigdon & Epting, 1985; Littlefield & Fleming, 1984-1985; Kastenbaum & Aisenberg, 1972; Vernon, 1970). Many attempts have been made to untangle the various responses toward death and it now appears that death anxiety is but one component of a whole constellation of death responses which includes death fear, death threat, and death attitudes (Neimeyer, Bagley & Moore, 1986).

Some investigators have posited that death concerns are present at several levels of consciousness (Feifel & Branscomb, 1973; Feifel & Hermann, 1973). Self-reports, projective tests, word associations, and galvanic skin responses were some of the methods utilized to tap into progressively deeper layers of death anxiety and fears (Littlefield & Fleming, 1984-1985; Pollak, 1979).

Inconsistent findings using these techniques, however, gave rise to the hypotheses that social desirability, denial, or

repression were responsible for skewing the results of death anxiety research (Dickstein, 1975; Nelson & Nelson, 1975; Durlak, 1972).

Still other investigators have found that differences in measured levels of death anxiety and fear existed depending upon factors such as the amount of satisfaction obtained in life, the degree of pain experienced, or whose death was being considered (Amenta, 1984; Trent, Glass, Jr. & Magee, 1981; Collett & Lester, 1969).

Neimeyer, Epting, and Krieger (1984) reviewed the fragmented literature of death and dying and concluded that the field was in dire need of a coherent, testable theory to conceptualize these phenomena. With so many disciplines contributing to thanatology (medicine, sociology, education, religion) the above authors suggest that psychology is best equipped to provide a theoretical framework for further empirical studies. In searching for a unifying theory to organize thanatology, some researchers have increasingly utilized Personal Construct Psychology, as first proposed by George Kelly (1955).

Personal Construct Theory

According to Kelly (1955), people organize experiences through a personally unique system of knowledge structures called personal constructs. Shunning the more positivistic approaches in psychology, Kelly saw individuals as "personal scientists" who actively construed their environments

through idiosyncratic personal construct systems. People used these knowledge structures (or personal constructs) to create, test, and modify personal theories which helped them organize their lives and anticipate future events.

Personal constructs can be thought of as individual interpretive structures whereby "some things are seen as alike and yet different from others" (Bannister & Mair, 1968, p. 489). These structures determine both a person's perceptions of, and reactions to, their environment. Personal constructs also enable people to interpret past experience and to make predictions about the future.

These personal constructs, or interpretive structures, are thought to develop over time into complex hierarchies enabling us to order our experience through bipolar constructs such as happy-sad, friend-enemy, male-female, silly-serious, etc. A person's construction of reality ultimately hinges upon a small number of "core" constructs which are central to that person's belief system and under which the vast matrix of other, more "peripheral" constructs are organized.

Kelly believed that people continually modified the secondary or peripheral constructs in response to conflicting environmental data. However core constructs are highly resistant to change. If the core constructs of a person's belief system become obsolete or defective, the whole matrix of constructs is jeopardized and previously

meaningful constructions of the world become chaotic and indecipherable.

Kelly theorized that threat occurs when a person's fundamental assumptions (core constructs) about reality are seriously challenged by experience. In fact, threat was defined by Kelly as "the awareness of imminent comprehensive change in one's core structures" (Kelly, 1955, p. 1). Death, according to Neimeyer and Chapman (1980), was just such a threatening event to many people:

A given person would regard death as threatening to the extent that they viewed their primary life projects as incomplete or "unfinished." To the individual whose central ideals remain unactualized, death threatens to destroy those expectations that granted life its significance; it aborts the development of a cherished identity still unborn. In contrast, to the individual whose major projects have been fulfilled, death is a source of less anxiety; it appropriately punctuates a meaningful life which has permitted the self to approximate its chosen ideals. (p. 234)

In 1974, Krieger, Epting, and Leitner developed the Threat Index, which is theoretically based on the Personal Construct Theory of George Kelly. During the past twenty years, the Threat Index has been utilized in both research and clinical contexts and is one of the most promising death orientation instruments in the literature today (Robinson & Wood, 1984; Simpson, 1980).

Despite its many applications, the Threat Index has not been administered in a hospice setting. Little is known about the death attitudes of hospice volunteers, yet they work intimately with terminally ill patients and families,

on a weekly, if not daily basis. Hospice volunteers would seem to be an "at-risk" population for the debilitating effects of death anxiety (i.e., poor patient care). Dying patients and their families need volunteers who are emotionally available and willing to help them physically and psychologically during this difficult time.

The Threat Index currently can yield two primary scores and four supplemental scores. It will be the main measure used in this study. Two other instruments have been used extensively in thanatological research and will also be used during this investigation (Death Anxiety Scale, 1970; Purpose in Life Test, 1969). The self-report responses of hospice trainees, experienced hospice volunteers, and non-hospice volunteers (144 subjects total) will be evaluated.

The primary purpose of this study is to show whether the Threat Index can be effectively used in a hospice volunteer setting to screen and evaluate hospice trainees and hospice volunteers. To this end, three hypotheses will be tested using the Threat Index (TI), the Death Anxiety Scale (DAS), and the Purpose in Life Test (PIL).

Hypotheses

The first hypothesis states that significant relationships exist between the two primary scores of the Threat Index (TI-actualization and TI-death threat) and the obtained scores on the Death Anxiety Scale (DAS) and the Purpose in Life Test (PIL) in this study's sample of 144

hospice trainees, experienced hospice volunteers, and non-hospice volunteers. This hypothesis will test whether death anxiety or sense of purpose can be predicted using the Threat Index.

The second hypothesis states that significant differences in DAS, PIL, or Threat Index scores (primary and supplementary scores) exist between hospice trainees and non-hospice volunteers. This hypothesis will test whether any of these tests could be used as a screening instrument for potential hospice volunteers.

The third hypothesis states that significant relationships exist between the two primary Threat Index scores (TI-actualization and TI-death threat) and the supervisory performance ratings given to experienced hospice volunteers. This hypothesis will test whether the Threat Index could be used as an evaluative instrument with volunteers currently involved in patient care.

CHAPTER II REVIEW OF THE LITERATURE

Effectiveness of Hospice Programs

In American society people typically die alone in large and unfamiliar environments. Is this the choice of the dying person? Is this preferable for the families involved? What are the ramifications of treating seriously ill people in this manner? In any given year, more than 75% of the deaths in the United States occur outside the home despite studies showing that 80% of the population prefers to die at home (Hine, 1979-80). The hospice movement has evolved in this country specifically in response to such troubling questions and statistics.

The growth of hospice programs in this country over the past two decades vividly demonstrates that traditional treatment options for terminally ill patients were sadly limited (Mor, 1987). Healthcare providers are beginning to acknowledge that factors surrounding the death of a loved one determine the quality of this natural experience, both for the patients and their families.

The "death surround" was a phrase coined by Rando (1984) to describe such things as the location of death, the presence of loved ones, the type and cause of death, and the degree of family preparation for death. Although the "death

surround" is important for the dying patient's comfort and peace of mind, it is also seen as playing an absolutely vital role afterwards in the family grieving process (Steele, 1990).

Canadian researchers with the Royal Victoria Palliative Care Unit (1976) conducted follow-up research on the survivors of terminally ill patients who had died during a six month period. One year after experiencing a loved one's death, the palliative care unit's families showed consistently fewer manifestations of grief when compared to the control families.

Buckingham and Foley (1978) evaluated the homecare services provided by the New Haven Hospice. Over a two year period, anxiety, depression, and social adjustment scores of hospice and non-hospice patients and families were compared. Hospice patients and families exhibited lower levels of anxiety and depression than did the non-hospice comparison group. The hospice group also had higher adjustment levels than those patients and families not involved in hospice care.

Parkes (1979) interviewed the surviving spouses of patients who had died of cancer in London. He eventually matched 34 patients from St. Christopher's Hospice with 34 patients from other area hospitals and interviewed the spouses of each patient. During their inpatient stays, significantly more hospital patients suffered "severe pain

and distress" than did the hospice patients. The patients at St. Christopher's Hospice were significantly more likely to be "out of bed" during the majority of their inpatient stay, and were twice as likely to know their diagnosis and prognosis. Finally, compared to their hospital cohorts, hospice patients endorsed "talking to other patients and visitors" as an important facet of their treatment.

In order to understand the factors involved in selecting an acceptable "death surround," Putnam, McDonald, and Miller (1980) surveyed 44 patient and family pairs. Half of the pairs chose to die at home and cited that being with family and friends, and playing an active role in treatment were critical determinants in their decision. The other half of pairs chose to die in the hospital and cited superior medical care and not burdening the family as important factors in their decision. When given the hypothetical situation of a nurse coming out to the home several times per week, 60-70% of the hospital-choosing pairs would choose to die at home.

Cameron and Parkes (1983) interviewed 40 close relatives of cancer patients who had either died in a Palliative Care Unit (PCU) or in other wards of the same hospital. One year after the deaths, relatives of PCU patients reported significantly fewer psychological symptoms and less persistent grief than the hospital control relatives. The relatives of the hospitalized control

patients were especially differentiated from the PCU families in their continued irritability, hostility toward others, and distressing memories of the patient's pain.

Kane, Wales, Bernstein, Leibowitz, and Kaplan (1984) randomly assigned terminally ill cancer patients to hospice and hospital treatment at a Veterans Administration hospital. The researchers matched 250 cancer patients on such things as age, race, occupation, and primary cancer site. The hospice patients and their families felt more satisfaction with the quality of care received, and families of the hospice patients felt less anxiety than their hospital family cohorts. The hospital-based controls were consistently more depressed than hospice patients and no significant differences were found between the two groups on symptom relief or cost effectiveness.

Ferrell (1985) interviewed families of terminally ill patients who had recently died both in hospitals and at home under the care of a hospice. Most of the "hospital families" interviewed expressed "serious dissatisfaction" with the care administered to their family member prior to death. Families enrolled in hospice programs prior to the death felt that both they and their family member had received "sensitive and personal attention." Ferrell further discovered that the spouses of those who died in the home felt less guilt, shock, confusion, and numbness than spouses of those who died in the hospital. Lastly, the

"hospital spouses" also showed a strong tendency to dwell on the negative circumstances of the death.

Using the Grief Experience Inventory (Sanders, 1979), Steele (1990) tested 60 relatives of patients who had died, half of whom participated in a hospice program prior to the loved one's death. She found that the relatives of hospice patients scored lower on the bereavement subscales of guilt, loss of control, despair, and depersonalization when compared to the relatives of non-hospice patients. Dying at home was also correlated with lower subscale scores of denial and death anxiety, regardless of the length of time the patient and family were involved in hospice.

Although a recent phenomenon, the hospice movement is quickly gaining acceptance among both the medical profession and the general public. Hospice's explosive growth (Mor, 1987; Price & Higgins, 1985) seems to reflect a deep dissatisfaction with traditional approaches aimed at caring for terminal patients. This needy population and their troubled families have been poorly served by years of institutionalized medicine. Research such as the studies cited above lends credence to hospice's assertion that palliative care can result in a higher quality of life for the terminally ill patient. Hospice can also play a major role in the long-term process of recovery for survivors' following the loved one's death.

The Role of Hospice Volunteers

According to a number of researchers (Cameron & Parkes, 1983; Krant, 1979; Williams, 1976), general hospital care is frequently unsuited for meeting the many needs of dying patients and families. Foremost among the problems cited by patients and families are difficulties in communicating fear, sadness, anger, resentment, and love (Krant, 1979). A review of the literature suggests that volunteers at hospice are increasingly being utilized to address the difficult psychological demands of the terminally ill and their families (Downe-Wamboldt & Ellerton, 1986; Caty & Tamlyn, 1983; DeVries, 1983).

Downe-Wamboldt and Ellerton (1986) investigated the activities of volunteers interacting with 144 terminal cancer patients. After each patient/family visit, volunteers endorsed one of six activities: listening and responding; socializing; providing physical comfort; providing spiritual comfort; information exchange; and referral. The activity most engaged in by volunteers when interacting with patients and families was listening and responding (58%). Although physical symptoms were cited by patients as their most prevalent concern (51%), emotional and social concerns were also heavily endorsed (33%). The researchers believe that volunteers can be invaluable in serving as liaisons between patients and medical staff.

Basile and Stone (1986-87) surveyed hospice practitioners for the emotional, interpersonal, and professional attributes characteristic of effective hospice personnel. The practitioners felt that maturity, warmth, tolerance, and a nonjudgmental attitude were the most important traits of hospice volunteers and nurses. Having previously experienced the death of a loved one was not universally seen as an important screening criterion for hospice personnel. The authors believe that hospice administrators need to focus attention on the emotional and interpersonal competencies of their volunteers.

Surveying 150 hospice volunteers at a midwestern hospice, Seibold, Rossi, Berteotti, Soprych, and McQuillan (1987) found that volunteers were engaged primarily in five activities: palliative care; administration; bereavement; in-home care; and community outreach. The researchers found that 80% of the volunteers felt that their strengths and talents were being well-utilized by hospice. However, volunteers found palliative care the most stressful activity and, along with bereavement, the least satisfying activities they perform. The authors suggest that working in pairs, offering volunteer support groups, and encouraging more interaction with paid hospice staff might help volunteers cope while performing these difficult activities.

Magnusen Hughes (1988) surveyed 125 volunteers from four Wisconsin hospices to identify volunteer activities and

assess how they perceived the needs of the patients and families that they serve. Volunteers overwhelmingly felt that patients and families have heavy emotional (fear, isolation, fatigue) and physical concerns (pain, nausea, constipation). The five most frequently provided services (and the five services seen as most valuable by volunteers) were friendly visiting; caregiver respite; bereavement visits; telephone contacts; and hospital visits. Volunteers also engaged in more task-oriented services such as bathing, transportation, shopping, and feeding. A sizeable minority of volunteers (22%) even performed technical procedures (wound care, oxygen therapy, and assistance in elimination). The author claims that an intense attachment develops between volunteers, hospice patients, and families that paid staff cannot duplicate.

Volunteers obviously fulfill many duties in their role as supportive caregivers for hospice patients and families. As hospice volunteers, their interactions with patients and families can take many forms because the needs of this population are so diverse. Addressing the emotional and interpersonal needs of hospice patients and families seems to be a vital function of hospice volunteers. The heavy emotional investment in these families by volunteers, while very rewarding, can also be overwhelming and lead to a premature withdrawal from the program (Finn Paradis, Miller & Runnion, 1987; Basile & Stone, 1986-87). Death anxiety is

thought to negatively influence this patient-caregiver bond (Waltman, 1990; Scanlon, 1989; Gadow, 1980; Feifel, 1967) and to be a significant contributor to "burn-out" in the health professions (Price & Bergen, 1977; Hay & Oken, 1972; Vreeland & Ellis, 1969).

Theoretical Origins of Death Anxiety

Prior to 1918, Freud (1915, 1918) maintained that death is unimaginable to the unconscious. As a result, because of their innate narcissism, people truly believe that they are immortal and are unable to fathom nonexistence. People who complained of death anxieties or fears were, in fact, suffering from castration anxiety or separation anxiety. If death anxiety truly existed, it would necessarily overwhelm any psyche. According to Freud, death anxiety and death fears were merely derivatives of more germane oedipal phenomena.

With the end of the Great War and its terrible destruction, Freud (1920) became more pessimistic and he revised a number of his beliefs. Taking cues from some of the contemporary findings in the physical sciences, he felt that the basic aim of all life forms was to return to simpler states. Freud felt that a basic tendency for humans was to strive toward death. Oedipal conflicts alone were insufficient to explain the human proclivity toward war and mass annihilation. Freud believed that a death instinct (Freud, 1920) must serve as the basis for a wide range of

troubling behaviors such as aggression, sadism, and masochism.

This later view of Freud's was not well-accepted by his analytic peers (Greenberger, 1965; McClelland, 1963; Brodsky, 1959; Fenichel, 1945) who continued to posit that death anxiety was merely a defensive attempt by patients to avoid oedipal issues. Reunion with the mother, separation from the mother, punishment for aggression, and punishment for incestuous wishes were just some of the examples of how these analytic writers continued to view death anxiety (Lonetto & Templer, 1986).

Jung (1933, 1959) did not believe in such a negativistic view of death. Instead he felt that people could have a wide range of beliefs about death and that these beliefs shaped people's daily lives. What was important was how these beliefs were integrated into daily living. He adhered to a type of developmental model of existence: the first half of life was concerned with preparing for life's primary activities (marriage, parenting, careers); the second half of life dealt with preparing for death (Lonetto & Templer, 1986).

This life and death duality was further explored by the works of Erik Fromm (1964). Fromm believed that all people have vestiges of biophilia (love of life) and necrophilia (love of death), but he was particularly interested in "necrophiliacs" who were inexplicably drawn toward death,

corpses, and decay. Fromm likened these "lovers of death" to Freudian "anal characters" who were orderly, forceful, emotionally cold, and ruminative. Fromm explored the lives of characters such as Hitler and Stalin and concluded that they were extreme necrophiliacs with a frightening capacity and willingness to destroy.

Adler (1927) and Frankl (1955) both downplayed the deleterious nature of death anxiety and refused to let their patients use fear of death as excuses for unproductive living. Adler claimed that people run away from life and its responsibilities by "fearing death" and, as a result, forego the rewards and fulfillment that come with living. Frankl was a World War II concentration camp survivor who urged his patients to seek meaning in all facets of life, even suffering and death. Frankl believed that life was made richer and actions were rendered more meaningful because humans were destined to die, realized it, and could prepare for it.

Finally, writers such as Becker (1973), Weisman (1972), and Zilboorg (1943) viewed death denial as extremely important, both for individuals and society as a whole. In order to lead productive lives, people must constantly deny death or the anxiety will become both terrifying and overwhelming. Mental illness and societal breakdown are the necessary outcomes of failing to effectively deny death.

No longer the sole domain of analytic and existential writers, the study of death and its psychological impact on humanity is now a field of inquiry in its own right. Researchers have approached death anxiety empirically to better understand this theorized phenomenon. The next section will explore some of the important research findings that have shaped current ideas about death anxiety.

Research on Death Anxiety

Religious thinkers, philosophers, dramatists, and writers have addressed the topic of death for millennia and have failed to agree on just what death entails or what a healthy approach to death should be. Not until recently have psychological researchers begun to systematically study death and its many cognitive, affective, and behavioral components. Predictably, few universally accepted truths have been uncovered, but researchers have gained important insights about death anxiety and the field has flourished.

Rando (1981), Feifel (1971, 1968, 1959), and others have written that human thoughts and behaviors are uniquely future-oriented and that death is the ultimate threat. Feifel was an early pioneer in the psychological study of death and was one of the first to demonstrate that a person's current behavior was largely influenced by their beliefs and attitudes about the future and their own mortality:

The underemphasis on the place of the future in psychological thinking is surprising because, in many moments, man responds much more to what is coming than to what has been. Indeed, what a person seeks to become may, at times, well decide what he attends to in his past. The past is an image that changes with our image of ourselves. It has been said that we may **learn** looking backward. . . we live looking forward. A person's thinking and behavior may be influenced more than we recognize by his views, hopes, and fears concerning the nature and meaning of death. (Feifel, 1959, p. 116)

Many psychologists (Durlak, 1973; Dickstein, 1972; Templer, 1970; Boyer, 1964; Brodsky, 1959; Feifel, 1959) painstakingly uncovered a wealth of interesting, but disorganized findings using empirical methods. The massive volume of death studies in the 1970s and 1980s was the catalyst for the creation of more specialized research and scientific journals. One of the first "facts" uncovered was that death had many meanings for different people.

Feifel (1968, 1959) wrote that death can represent "a teacher of universal truths," the "gentle night," "peaceful sleep," an "adventure," a "great destroyer," reunion with family, loss of control, etc. Kastenbaum (1977) viewed death from four broad perspectives: the great leveler or equalizer; the great validator; an event that radically alters relationships with others (either uniting or separating); and as an end to an opportunity of achievement and experience. Death is universal, but its meaning is highly idiosyncratic.

One aspect of death which has fascinated poets, Freudians, and thanatologists alike is the anxiety

associated with death. Even this seemingly unitary concept has been shown to have multidimensional features (Lonetto & Templer, 1986). Gilliland and Templer (1985-86), Ramos (1982), Schulz (1978), Nelson (1978), and others have shown that death anxiety can generally be conceptualized as containing four independent components:

1. Concern about both the cognitive and emotional impact of dying and death.
2. Anticipation and fear of the physical alterations brought about by dying and death.
3. Awareness of the finite time between birth and death and of the rapidity of its passage.
4. Concern about the stress and pain accompanying illness, disease, and dying.

Researchers are convinced that these factors, either singly or in combination, determine the level of death anxiety present in an individual. These factors are also thought to determine the strength of the relationship between death anxiety and a number of other psychological variables (Pollack, 1979-80).

Further complications regarding the understanding of death anxiety have arisen with the finding that death attitudes and responses to death change within an individual and across groups over time (Rando, 1987). Feifel (1977, 1971) has even shown that people can have contradictory attitudes about death simultaneously. Although researchers have made huge inroads in the understanding of death attitudes, it is quite clear that many questions remain.

One of the most troubling problems in thanatology has been the failure to consistently delineate the difference between death anxiety and death fear in the scholarly literature and in various assessment instruments (Kalish, 1981). Although writers frequently use death anxiety and death fear interchangeably, these terms are not thought to be synonymous (Kastenbaum & Kastenbaum, 1989; Neimeyer, Behnke & Reiss, 1983; May, 1977). Both terms imply a state of discomfort, yet death fears are very specific and can easily be articulated (fear of slow, painful death; fear of being alone; fear of decomposing, etc.).

Death anxiety, on the other hand, is thought to be a more global feeling that does not lend itself to easy articulation (Kastenbaum & Kastenbaum, 1989). Death anxiety is partly comprised of specific death fears, but most of its debilitating effect comes because its source cannot be pinpointed. According to a large number of researchers, (Kastenbaum & Kastenbaum, 1989; Feifel, 1977; May, 1977; Lifton, 1975; Kubler-Ross; 1969; Wahl, 1959) death anxiety can result in psychosis, depression, fatigue, self-destructive behavior, violence, substance abuse, and a host of other physiological and cognitive symptoms.

Perhaps the most compelling definition of death anxiety comes from the research of Personal Construct Psychology. Neimeyer, Behnke, and Reiss (1983) theorized that "death anxiety reflects the inability to understand or meaningfully

construe death" (page 249). Or put another way, an individual does not have the constructs in place to assimilate "death." A person is left uneasy because "pieces do not fit." This uneasiness may necessitate some minor adjustments in that individual's construct system. If minor adjustments are unable to resolve the incongruence between the way a person sees "themselves" and "death," more comprehensive change is required and death threat is the result. Death anxiety seems to be a natural precursor to the more debilitating death threat.

Clearly the field of thanatology has much to learn about humanity's attitudes about death. To a large extent, people appear to create their own meanings about death. It can be a terrifying, mysterious cloud on the horizon of life or it can be a driving force which empowers people to create, to achieve, and to love. One of the most important findings by researchers has been that death is finally being recognized as the complex phenomenon that it is. The current research project was devised with this multidimensionality in mind.

Instruments Used in this Study

The current study utilizes the two most popular instruments in thanatology, the Death Anxiety Scale (Templer, 1970) and the Threat Index (Krieger, Epting & Leitner, 1974). Both tests are empirically sound and have proven quite useful to researchers in this field. The third

instrument used is Crumbaugh and Maholick's Purpose in Life Test (1969). This test is based upon Viktor Frankl's belief that finding meaning and purpose are main motivations in life. The three tests were grouped in a packet containing an informed consent form (Appendix A) and a general demographics page (Appendix B). The tests will be discussed in more detail below.

Death Anxiety Scale

Templer's Death Anxiety Scale (1970) is the most widely used and researched psychometric instrument in thanatology (Kastenbaum & Kastenbaum, 1989). Templer devised this scale as an improvement over what was probably the first death anxiety measure, Boyar's Fear of Death Scale (1964). Templer felt that Boyar's 18-item test had construct validity problems and did not cover a sufficiently wide array of life experiences. After validity and internal consistency checks were made, Templer's 40-item, rationally-devised, true-false test was pared down to its current 15 items (see Appendix C). In the present study, this test will be used to measure volunteers' "unpleasant emotional state precipitated by contemplation of their own deaths" (Templer, 1970, p. 166).

The Death Anxiety Scale has been correlated with dozens of physical and psychological variables, ranging from demographic information (age, sex, race), physical health, risk-taking behavior, depression, locus of control, to self-

concept (Lonetto & Templer, 1986; Pollack, 1979-80). Generally speaking, high death anxiety scores are almost invariably associated with both physical and psychological pathology (Lonetto & Templer, 1986). This scale has also been correlated with every other published death anxiety scale and with most of the currently used personality inventories. For the past 20 years, the Death Anxiety Scale has served as the standard by which other death anxiety instruments are measured and has served as a catalyst for the continued refinement of our understanding of death anxiety.

Threat Index

Second only to the Death Anxiety Scale (Templer, 1970) in thanatological research prevalence, the Threat Index (Krieger, Epting & Leitner, 1974) represents a significant development in the study of death. Because of its strong foundation in the Personal Construct Theory of George Kelly (1955), the Threat Index represents a theoretically grounded instrument which provides a unique format from which cogent, testable definitions and hypotheses can be investigated. Since its inception, this instrument has greatly contributed to the improvement in the calibre of research in this fragmented field (Neimeyer & Epting, 1992; Simpson, 1980; Kastenbaum & Costa, 1977).

A number of formats for the Threat Index have been developed in order to best understand the intensely personal

and varied conceptualizations of death. A number of scoring procedures have also been reported with several more holding promise for further exploration (Neimeyer & Epting, 1992). Originally in a lengthy interview format, the 40 most popular constructs of the Threat Index were transformed into a self-administered questionnaire (Krieger, Epting & Hays, 1979) which made group administrations possible (see Appendix D).

The Threat Index has been used to study the sick (Robinson & Wood, 1983; Viney, 1983), health care providers (Neimeyer, Behnke & Reiss, 1984; Rainey, 1984), the religious (Powell & Thorson, 1991), the elderly (DePaola & Neimeyer, 1992; Myers, Wass & Murphy, 1980), and the depressed (Rigdon, 1983). The Threat Index has also been used in comparing hospice patients with ill and recovering patients (Hendon & Epting, 1989).

Purpose in Life Test

The Purpose in Life Test (1969) is an attitude scale based upon the existential works of Viktor Frankl. This self-administered questionnaire is protected by copyright laws and not included in the Appendices. According to Frankl (1969), the primary motive in life is "the will to meaning." This uniquely human characteristic represents a search for significance which is particularly salient in a materialistic, mechanistic society. A person who finds little meaning or purpose in life lacks personal identity

and experiences "existential vacuum" which may lead to further psychological impairment (Crumbaugh & Maholik, 1981). In the present study, the Purpose in Life Test will measure the extent to which hospice trainees, volunteers, and non-hospice volunteers/workshop attendees feel that their lives are fulfilled, meaningful, and full of purpose.

Used in over 110 published studies, the Purpose in Life Test has assessed the "purposefulness" of such diverse populations as substance abusers (Mueller, 1977), hospitalized patients (Henrion, 1983), adolescents (Barber, 1982), the elderly (Baum & Boxley, 1983), the mentally ill (Pearson & Sheffield, 1989), health care providers (Amenta, 1984), prisoners (Whiddon, 1983), correctional officers (Miller & Adwell, 1984), the bereaved (Florian, 1989-90), the religious (Stones, 1980), and the suicidal (Kukian & Madison, 1987-88).

The Purpose in Life Test has shown significant correlations with self-acceptance, achievement, confidence, responsibility, and emotional stability, and has been negatively correlated with depression, poor ego strength, neuroticism, anxiety, and acting out behaviors (Crumbaugh & Maholick, 1981). This test has also appeared in 13 studies specifically exploring death attitudes and beliefs.

Death Anxiety and Health Care Providers

Researchers have long theorized that death anxiety would necessarily have a negative impact on those people who

treat and care for the sick and dying. According to Howells and Field (1982) the death anxiety of health professionals can result in significant interpersonal stress for them and can further isolate and alienate patients and families coping with a terminal illness. Herman Feifel (1959) again was an early catalyst for this area of research.

Feifel (1965) conducted a survey with professionals and found that physicians had significantly high death anxiety (compared to other nonmedical professionals) and that their death anxiety was even higher than that of their patients. Feifel hypothesized that the choice of a medical career reflects a doctor's attempt to master a high level of death anxiety by being in a position to combat death. Needless to say this was a surprising discovery and led to a rash of studies on the death anxiety of health care professionals.

Caldwell and Mishara (1972) arranged standardized interviews with 73 practicing physicians on the topic of death and dying. Only 13 completed the interview after being informed that the the ten minute task was focused on their personal attitudes and feelings regarding dying patients. Most doctors simply aborted the interview without further discussion, but some stated that their feelings "interfered" with effective treatment. The authors question how widespread this type of reaction is in the medical profession and how prepared physicians are to deal with the

psychological and interpersonal concerns of their terminal patients.

Schulz and Aderman (1978-79) tested the assumption that the patients of highly death anxious physicians would survive longer than those with low death anxious physicians. The authors hypothesized that doctors with high death anxiety would deny death and take heroic measures to save the patient. The study showed that the terminal patients of highly death anxious doctors were in the hospital significantly longer than those with low or medium death anxiety. The authors suggest that physicians' professional behavior may be influenced by death anxiety with important financial and emotional consequences for their patients and families.

Shady, Brodsky, and Staley (1979) asked over 200 Canadian nursing students to complete a test packet (containing Templer's Death Anxiety Scale, 1970) and report later for a personal interview. The authors found only half of the students willing to return for the second part of the study (41 failed to follow through and about 50 could not be contacted). Those students who took part in the interview had significantly lower death anxiety scores (7.23) than those who failed to follow through (8.05) or those who could not be contacted (9.22). The authors concluded that the Death Anxiety Scale accurately predicted those students who

would not expose themselves to further death-related stimuli.

Stoller (1980-81) distributed questionnaires to 62 nurses assessing the death-related fears and the uneasiness experienced in working with the terminally ill. Nurses apparently utilize avoidance strategies in situations bringing them in contact with death (i.e., avoiding a dead body, treating the patient as an object, interacting only when a specific nursing task is necessary). In these cases, avoidance decreases the anxiety and uneasiness experienced by the nurses. No such strategy was helpful when the nurse had to interact with the patient in an "unstructured" task (a patient approaches them about death). The author found that death fears did affect interactions with dying patients and that nurses were much more comfortable engaging in depersonalized, hospital-structured tasks.

Neimeyer, Behnke, and Reiss (1984) used the Threat Index (1974) and clinical vignettes to predict physicians' physiological and behavioral reactions to death. They found that, when confronted with patient death, doctors with high levels of death threat and death anxiety significantly utilized maladaptive coping responses (overinvolvement in work, meticulously looking for medical mistakes, not attending the funeral, not talking about the death, alcohol and drug use). The authors concluded that interventions should address the costs and benefits of these coping

responses and should help doctors with high death threat and death anxiety assimilate death into their personal and professional identities. If they could assimilate death into their identities, doctors might be able to anticipate and accept patient deaths more effectively.

A group of researchers in Canada (Hatfield, Hatfield, Geggie, Taylor, Soti, Winthers, Harris & Greenley, 1983-84) questioned over 1000 hospital staff (doctors, nurses, chaplains, social workers, aides, orderlies) about death and terminal care. Compared to all the other hospital groups, physicians felt that patients and families should not share in most treatment decisions. Physicians did not believe that patients would want to know their prognosis, nor did they feel that telling patients their prognosis was as important as did the other hospital groups. Finally, physicians were less enthusiastic about encouraging patients to talk about their illness. The authors concluded that physicians seem less attuned to the emotional and psychological needs of their terminally ill patients than other hospital employees and that death anxiety may result in hospital staff working at cross-purposes.

Campbell, Abernethy, and Waterhouse (1983-84) mailed out questionnaires to 25 physicians and 31 nurses at Vanderbilt University Medical Center. Nurses consistently viewed death more positively (birth, safety) than did doctors (frightening, cold). Doctors saw their roles

primarily in terms of "responsibility" whereas nurses viewed their roles in terms of "caring." Professional orientation, not gender, was responsible for the observed differences in death attitudes. The authors question whether physicians' heavy sense of responsibility invokes a sense of blame and failure that tinges their perceptions of death. This emphasis on the "cure" versus the "care" may result in emotionally-distant physicians who utilize suppression and intellectualization to combat death anxiety.

Neimeyer and Neimeyer (1984) examined the death anxiety of suicide counselors as it related to their ability to respond to suicidal clients. Compared to the control group, suicide interventionists had significantly lower death anxiety and no relationship existed between death anxiety and competence in handling suicidal crises. These findings contradict an earlier study by Neimeyer and Dingemans (1980) that showed suicide workers having higher levels of death anxiety than comparable control groups. The authors believe that the present results dispel the notion of Feifel, et al. (1967) that suicide workers are merely combatting their own death anxieties with their chosen line of work.

Eakes (1985) investigated the relationship between death anxiety and attitudes toward the elderly among 159 nursing home staff (RNs, LPNs, nurse aides). Her hypothesis that staff members with high levels of death anxiety would endorse more negative views of the elderly was confirmed.

Neither death anxiety scores nor attitudes toward the elderly differed significantly with age, race, nursing home experience, professional position, personal experience with death, or religious beliefs. According to the author, this study shows that the death anxiety levels of staff members have a direct influence on the quality of nursing home care given to the elderly.

Eggerman and Dustin (1985) studied the relationship between personal death orientation (as measured by the Threat Index) and the behaviors of physicians and medical students. They found that, compared to those with low death threat, medical students with high death threat were less likely to directly inform a patient of a terminal diagnosis. This "circumspect" approach was in the form of considering extenuating circumstances of the patient. Compared to low death threat physicians, doctors with high death threat were more likely to consider "psychological factors" before speaking to a seriously ill patient about death.

Kane and Hogan (1985-86) attempted to compare the conscious death anxiety of physicians (surgeons, internists, psychiatrists) with a measure of repression and a projective test (measuring covert death anxiety). Based on each groups' exposure to death, they hypothesized that high-repressors (surgeons) should report less overt death anxiety but show more covert death anxiety on the projective test. Psychiatrists were expected to be low-repressors. The

authors did find an inverse relationship between overt death anxiety and the tendency to repress feelings, but the expected inverse relationship between overt and covert death anxiety did not develop. Those physicians endorsing many death anxiety items did not utilize repression and had many death references on the projective instrument. The authors concluded that little useful information was obtained by incorporating a measure of covert death anxiety in this study.

Thompson, Jr. (1985-86) compared the death anxiety and attitudes toward the dying of palliative, surgical, and pediatric nurses. He found that palliative nurses had higher levels of death anxiety than the other two nursing groups, but also felt significantly less uneasy around the dying, more useful to the patient, more emotionally expressive, and more fulfilled in their job. The author contends that these findings reflect primarily the influence of the work setting on nurses, not their personal characteristics or experience.

Field and Howells (1988) questioned graduating medical students relative to their attitudes about dying patients (all had experienced patient death). The authors predicted that death anxious students would view dying patients as more difficult and problematic, utilize more avoidance strategies, and keep personal concerns concealed from others. The results showed that most medical students

viewed personal interactions with dying patients as much more difficult tasks than with other patients and most students prefer more "structured" interactions with this population (conducting case histories). Death anxious students were less likely than other students to discuss the patient's prognosis with the patient or family and were more likely to experience more psychological problems in dealing with dying patients.

Hare and Pratt (1989) questioned 203 professional nurses and 106 nursing aides on their fear of death and comfort with patients with a "poor prognosis for survival." A significant negative relationship was found between fear of death and comfort with poor prognosis patients. Exposure to death played an important role in comfort levels. Compared to nurses with infrequent exposure to death, nurses with high death exposure had higher levels of comfort when dealing with the dying and were less afraid of the death of a loved one or of suffering a premature death themselves. The authors suggest that future studies incorporate behavioral measures into research designs to assess the relevance of self-reports.

Cochrane, Levy, Fryer, and Oglesby (1990-91) explored the death anxiety, behaviors, and attitudes of 99 New Jersey oncologists. Significant positive relationships were found between death anxiety scores and difficulties with disclosing diagnoses to patients, difficulties interacting

with dying patients' families, and lingering doubts about the patient's treatment. Elevated death anxiety scores were highly predictive of maladjustment scores and general life dissatisfaction. Death anxiety was not related to years of experience or chosen medical field as three of the four groups were within the high-normal range of scores.

Brockopp, King, and Hamilton (1991) explored the differences between two types of nurses (palliative and non-palliative) on death anxiety, death attitudes, and perceptions of control. The study utilized two types of non-palliative nurses (psychiatric, orthopedic). The researchers found that palliative nurses experienced significantly less death anxiety and more positive death attitudes than the other two groups of nurses. No differences between the nursing groups were found on perceptions of control. Even though differences in death anxiety and death attitudes exist, no effort was made to determine the importance of such variables relative to patient care.

Many studies have been conducted on the death anxiety of selected medical and professional staff. In general, the more groups are exposed to death, the less death anxiety they report. Those with high levels of death anxiety utilize maladaptive coping responses (Field & Howells, 1988; Neimeyer, et al., 1983; Shady, et al., 1979; Caldwell & Mishara, 1972), have difficulty in interacting with terminal

patients and their families (Cochrane, et al., 1990-91; Hare & Pratt, 1989; Hatfield, et al., 1983-84), and endorse negative attitudes toward the elderly and dying (Eakes, 1985; Campbell et. al, 1983-84). These studies and many others lend credence to the claim that death anxiety plays an important role in the care afforded to the sick and dying.

Death Anxiety and Hospice Volunteers

Despite the major role that hospice volunteers perform in the service of terminally ill patients and their families, few empirical studies have been conducted on this vital component of hospice care. The scarce research that has been conducted on volunteers has primarily focused on training, implementation, and utilization strategies (Dershimer, 1988; Dush, 1988; Seibold, Rossi, Berteotti, Soprych & McQuillan, 1987; Mantell & Ell, 1985; Buckingham & Lupu, 1982; Dorang, 1981).

How do hospice volunteers feel about death and dying? Do they fear death as much as the general population? Can a volunteer with elevated death anxiety perform as an effective caregiver to someone who is dying? Research questions such as these have been generally neglected by current researchers.

Amenta and Weiner (1981) administered the Death Anxiety Scale (Templer, 1970) and the Purpose in Life test (Crumbaugh & Maholick, 1969) to 98 hospice workers in

Pittsburgh (59 of whom were volunteers). The authors found a significant inverse relationship between scores on the two tests. Those participants who showed little death anxiety had a higher sense of purpose in life. Amenta and Weiner suggest using these instruments as an aid in screening potential volunteers.

In a study of 42 experienced volunteers, Amenta (1984) examined differences between those who withdrew from hospice (after less than one year) and those who persisted. Both groups had been screened for suitable personality characteristics (empathy, expressiveness, open-mindedness, patience) and were given the Death Anxiety Scale (Templer, 1970) and the Purpose in Life test (Crumbaugh & Maholick, 1969). Persisters showed significantly less death anxiety and more purpose in life than their "withdrawing" cohorts. Amenta uses her findings to support Schulz's (1978) claim that low death anxiety (having faced the reality of one's own death) is characteristic of effective hospice workers.

Finn Paradis and Usui (1987) examined the personality traits of successful hospice volunteers in hopes of identifying key traits to look for in volunteer recruits. The results of this study confirmed other research findings showing that hospice volunteers have higher levels of empathy and lower levels of death anxiety than do other volunteers (Amenta & Weiner, 1981; Newell, 1980; Gotsch, Donaldson & Hamilton, 1979). However, using ratings

elicited by the volunteer coordinators, the authors found no positive relationship between volunteers possessing these traits and subsequent effectiveness as volunteers. Although not useful in predicting current volunteers' performance, the absence of these traits did accurately predict whether volunteer recruits would complete hospice training.

Lafer (1989) investigated the personality characteristics of 75 prospective hospice volunteers in order to predict which volunteers would remain active after completion of training. The group was then rated by volunteer directors six months after training. Low death anxiety correlated strongly with volunteers who persisted after training. Those volunteers rated "satisfactory persisters" exhibited the lowest levels of death anxiety, followed by "unsatisfactory persisters" and "dropouts." The author cited the results as corroborating support for Amenta's (1984) belief that death anxiety can help predict who will become a successful hospice volunteer.

Clearly the impact of death attitudes on volunteers at hospice has received scant attention in the thanatological literature. The limited research that has been done in this area suggests that death anxiety (as measured by the Death Anxiety Scale) is inversely related to purpose in life. The few relevant studies seem to indicate that volunteers are more likely to remain active in hospice if they exhibit low death anxiety and high purpose in life. At the present

time, no study has utilized the Threat Index in volunteer samples or uncovered correlations between any of these three instruments and the ability of hospice volunteers to perform their tasks as caregivers.

The current study will attempt to demonstrate that the Threat Index can be used both as an effective screening instrument for hospice trainees and as a helpful evaluative instrument with which to measure active hospice volunteer performance. It is further hoped that this study will be seen as making an important contribution to the growing literature on the efficacy of the Threat Index as a viable thanatological research tool.

Relatively little is known about the death attitudes of hospice volunteers, nor has the Threat Index been administered to this population. Death attitudes, self-actualization, and purposefulness in hospice volunteers appear to be potentially fruitful areas of investigation with both intuitive appeal and clinical relevance. Given the recent nationwide emphasis on making health care more affordable, research focusing on volunteer characteristics might play a useful role in helping hospice obtain this elusive goal.

CHAPTER III METHOD

Instruments

Prior to 1970, the only empirically derived method for assessing death attitudes was Boyar's Fear of Death Scale (Boyar, 1964). Earlier questionnaires, checklists, interview formats, and projective techniques used to assess "death anxiety" were either methodologically biased or had serious validity and reliability concerns. The measures in this study will be the previously described Death Anxiety Scale (Templer, 1970), the Purpose in Life Test (Crumbaugh & Maholick, 1969), and the Threat Index (Krieger, Epting & Leitner, 1974).

Death Anxiety Scale

The Death Anxiety Scale (Templer, 1970) is a 15-item true-false test that has been shown to be effective in quantifying death anxiety in a wide variety of populations (Appendix C). Nine of the items are keyed "true" with six items keyed "false" for a total possible score ranging from zero (low death anxiety) to 15 (high death anxiety). The test can be administered to individuals or to groups and the written directions are located at the top of the one-page form. A fourth grade reading ability is necessary to

understand the instructions and the items. Total time required for administering and completing the scale is five minutes.

The Death Anxiety Scale (DAS) initially had 40 rationally devised items which a panel of seven independent judges (a clinical psychologist, two graduate students and four chaplains in a state mental hospital) rated on a five-point basis (1 = irrelevant to death anxiety and 5 = very greatly associated with death anxiety). Those items receiving an average rating below 3.0 (3 = moderately associated with death anxiety) were discarded (nine items). The remaining 31 items were imbedded in 200 filler items from the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1943).

The resulting 231 item questionnaire was given to three groups of university students from universities in Tennessee and Kentucky to determine internal consistency. Only those DAS items that had point biserial coefficients significant at the .01 level in two out of three analyses were retained (15 items). The probability of obtaining .01 significance in two out of three analyses where no correlations truly existed is .028. Relative independence of items was determined by computing phi coefficients. No correlation coefficients between the retained items exceeded $r = .65$ so little inter-item redundancy was inferred.

Reliability of the 15 item DAS instrument was tested by readministering the items to a group of college students three weeks later. The obtained Pearson product-moment correlation coefficient of .83 and the obtained Kuder-Richardson correlation coefficient of .76 demonstrated reasonable internal consistency.

The DAS was also tested for a response bias toward over-agreement with the items. No significance at the .05 level was found suggesting that an agreement response set accounts for little, if any, of the DAS score variability. The Pearson correlation between the DAS and the Marlowe-Crowne Social Desirability Scale also failed to reach significance ($r = .03$).

Construct validity of the DAS was established in two separate procedures at a Kentucky State Hospital. First, psychiatric patients with high death anxiety (those who had spontaneously verbalized a fear or preoccupation with death) were matched with a control group of psychiatric patients with low death anxiety in terms of diagnosis, sex, and age. Mean DAS score of the death anxious patient group was 11.62 compared to the control group mean of 6.77. This result was significant at the .01 level (two-tailed t of 5.79).

A second attempt at establishing DAS construct validity involved administering the DAS to college undergraduates at two Kentucky universities and correlating each students' score with obtained scores on the Fear of Death Scale

(Boyer, 1964), a death association task, and the MMPI scales of anxiety. A correlation coefficient of .74 was found between the DAS and the Fear of Death Scale resulting in significance at the .01 level. Scores on the DAS were also significantly correlated (at the .01 level) with the Manifest Anxiety Scale ($r = .39$), the Welsh Anxiety Scale ($r = .36$), and with the number of emotional words elicited by the death association task ($r = .25$; $p < .05$).

Although the DAS has no formally established normative data, extensive research was conducted (23 groups, 3600 subjects) during the test's construction and validation (Templer, 1970). According to Templer and Ruff (1971), mean DAS scores for nonpsychiatric subjects typically range from 4.5 to 7.0 with a standard deviation of 3.0. Females consistently score higher on the DAS than do males and psychiatric populations obtain higher scores than do nonpsychiatric populations (Templer & Ruff, 1971). A major study comparing the scores of 2500 subjects between the ages of 18 and 85 (Templer, Ruff & Franks, 1971) found no significant relationship between age and DAS scores.

Purpose in Life Test

The Purpose in Life Test (Crumbaugh & Maholick, 1969) is a 20 item, Likert scale test that purportedly measures the degree of meaning and purpose that each respondent feels. All 20 questions are scored on a "1" to "7" basis, resulting in a range of scores between 20 - 140. Higher

scores reflect a stronger sense of purpose and meaning. The Purpose in Life Test (PIL) can be administered both to individuals and groups without lengthy explanation or elaboration. A fourth grade reading ability is necessary to comprehend the items and the instrument typically takes less than ten minutes to administer and complete.

The PIL has its origins in the existential theory of Viktor Frankl (1969) and was developed to measure the degree to which respondents view their lives as full of purpose and meaning. Frankl claimed that one of the unfortunate consequences of a highly mechanized society is loss of human initiative and personal meaning. He hypothesized that lack of purpose (i.e. existential vacuum, noogenic neurosis) is a universal trait in modern times and present, to varying degrees, in all people (not just the psychotic or abnormal). However, the incidence of lack of purpose would be expected to be higher in psychiatric populations.

Crumbaugh (1968) administered the PIL to nearly 1200 subjects (six psychiatric groups and four nonpsychiatric groups) in an attempt to assess the construct validity of this instrument. He was able to correctly predict the order of mean PIL scores for the ten groups. The difference between the psychiatric mean ($M = 92.60$, $SD = 21.34$) and nonpsychiatric mean ($M = 112.42$, $SD = 14.07$) yielded a significant t value (two-tailed) at the .001 level.

A significant difference in score variability between psychiatric and nonpsychiatric groups (at the .01 level) was taken by Crumbaugh (1968) as confirmation of the logotherapy hypothesis that psychiatric patients would experience an overall wider range of PIL scores than would nonpsychiatric subjects.

Concurrent validity of the PIL was evaluated in two ways. First, therapists were to estimate each of their clients' responses to the PIL. These scores were then correlated to each clients' ($N = 50$) actual PIL responses. The Pearson product-moment correlations between patient and therapist scores was .38.

In a related study, ministers completed the PIL for each of their parishioners ($N = 120$) based on the purpose and meaning exhibited by each church member. Each church member also completed the PIL and the Pearson product-moment correlations between both groups' scores was .47. Both studies are in line with the level of criterion validity typically demonstrated from a single measure of a complex trait.

Split-half reliability of the PIL was found to be .81 in a group of 105 nonpatients and 120 patients (Crumbaugh & Maholick, 1964). Using the Spearman-Brown procedure, the researchers corrected this figure to .90. In 1968 Crumbaugh obtained a split-half reliability of .85 (Pearson product-

moment) for 120 Protestant parishioners and the Spearman-Brown procedure corrected this figure to .92.

Crumbaugh and Maholick (1964) correlated the PIL with an informal questionnaire used by Frankl (1958) to estimate the presence of existential vacuum in 136 patients and nonpatients. They quantified the questionnaire and found a Pearson product-moment correlation of .68 between the two instruments.

Crumbaugh (1968), Elmore and Chambers (1967), Nyholm (1966) and Crumbaugh and Maholick (1964) have tested various groups of undergraduates and outpatients and have found negative correlations between the PIL and the Depression scale of the MMPI in the range of $-.42$ to $-.65$. These researchers have also correlated the PIL with the MMPI K validity scale ($.39$), Psychasthenia scale ($-.44$), and the Social Isolation scale ($-.45$). Crumbaugh (1968) and Elmore and Chambers (1967) both tested college students and found negative correlations between the PIL and separate measures of anomie in the range of $-.32$ to $-.51$.

Snavely (1963) found an initial correlation of .57 between the PIL and the Crowne-Marlow Social Desirability Scale. Afterwards, subjects were randomly assigned "acceptable" and "unacceptable" scores, and a retest indicated correlations between the two measures had dropped to .36 with little or no movement in the unacceptable group's scores. The author suggested that the PIL and the

Crowne-Marlow Social Desirability Scale were responding to social desirability in qualitatively different ways. He concluded that the PIL was not highly influenced by social desirability. The author does caution against the use of the PIL in competitive situations where social desirability may be aroused.

Other studies using nonpsychiatric populations (Crumbaugh, Lozes & Shrader, 1968; Nyholm, 1966) have found significant positive correlations between the PIL and a number of subscales of the California Personality Inventory, the Cattell 16 Personality-Factor Test, and the Gordon Personal Profile (achievement, emotional stability, self-acceptance, self-control, responsibility). Significant negative correlations were found on such things as anxiety, insecurity, neuroticism, and suspiciousness. These authors failed to find any significant correlations between the PIL and empathy, intelligence, sex, age, or education.

Crumbaugh (1968) determined that a cutoff score of 102 (out of 140 total) with a standard deviation of 19 was an appropriate estimate of mean purpose-in-life for most groups. He suggested that raw scores ranging from 92 to 112 on the PIL are suggestive of "average" purposefulness and are not easily interpretable. Raw scores of 113 and above suggest the presence of high levels of purpose and meaning, while raw scores 91 and below suggest the lack of clear purpose and meaning in life.

Threat Index

The Threat Index (Krieger, Epting & Leitner, 1974) is arguably the most methodologically sound instrument used in death and dying research. Psychometric and administrative modifications have continued since its inception until today it is widely recognized as a model in the field (Simpson, 1980; Kastenbaum & Costa, 1977).

The self-administered Threat Index (Krieger, Epting & Hays, 1979) that is used in this study contains 40 of the most popular bipolar constructs (e.g., empty vs. meaningful; pleasure vs. pain; calm vs. anxious) elicited by the older interview format Threat Index. These 40 dimensions are printed on three test pages (Appendix D) and respondents are to circle the end of each bipolar dimension that corresponds to "self" (page 1), "ideal self" (page 2), and "own death" (page 3). The Threat Index takes 15-30 minutes to complete.

Discrepancies on "self-ideal self" dimensions (or splits) are regarded as a quantified measure of the "actualization" that the respondent feels on a 0-40 point scale (Neimeyer & Chapman, 1980). Low scores (few splits) reflect a strong sense of actualization in the respondent and high scores indicate that little actualization is present. Likewise, discrepancies between "self-own death" ratings yields a 0-40 point score that quantifies the extent to which a respondent has integrated "death" into his world view. Again, as splits increase, so does the estimated

level of death threat. Thus, the traditional method of scoring the Threat Index results in a TI-actualization score and a TI-death threat score. Normative data for these two primary scores of the Threat Index have been published (Krieger, Epting, & Hays, 1979) with 20 TI-actualization splits and 20 TI-death threat splits approximating average levels of self-actualization and death threat.

In addition to the above traditional method of scoring the Threat Index, the current study will also explore an additional Threat Index scoring procedure recently devised by Pritchard, Epting, and Beagle (1991). Using construct responses from all three pages of the Threat Index simultaneously, four supplemental scores can be generated for each subject based upon whether the person considers themselves and death in a positive or negative manner. These four supplemental scores are the Death-accepting score, the Death-threatened score, the Depressed score, and the Death-attracted score. The four supplemental scores could each conceivably range from a score of 0 - 40, but the sum of all four scores has to equal 40. Each of the supplemental scores are described below.

The Death-accepting score is characterized by having "self," "ideal self," and "death" along the same positive pole of a construct (e.g., happy vs. sad; meaningful vs. empty). High scores reflect both a positive view of the self, and of death. This score is hypothesized to be

positively related to optimal functioning (Rigdon & Epting, 1985).

The Death-threatened score is characterized by having "self" and "ideal self" along the same positive pole of a construct and "death" identified with the opposite end of the construct (e.g., self and ideal self = meaningful; death = empty). High scores reflect a positive view of self, a negative view of death, and are thought to be predictive of those variables commonly associated with death threat (Neimeyer, 1988).

The Depressed score is characterized by having a split between "self" and "ideal self" (e.g., self = empty; ideal self = meaningful) along with a negatively-valenced construct pole for death (e.g., death = empty). High scores reflect a negative view of both self and death and is thought to be related to a number of depression correlates (Rowe, 1983; Beck, 1967).

Lastly, the Death-attracted score is also characterized by a discrepancy between "self" and "ideal self" constructs. However, "death" is viewed with the positively-valenced construct pole (e.g., self = sad; ideal self = happy; death = happy). This profile is thought to be related to suicidal preoccupation (Neimeyer, 1985; Beck, 1967).

These four supplemental scores from the Threat Index will complement the two primary scores discussed earlier (TI-actualization, TI-death threat). In contrast to the

primary scores, no normative data have been established for the four supplemental Threat Index scores.

Internal consistency of the traditional method of scoring the Threat Index was demonstrated on college students and mixed adults by a number of independent studies (Moore & Neimeyer, 1991; MacInnes & Neimeyer, 1980; Krieger, Epting & Hays, 1979; Krieger, Epting & Leitner, 1974). Split-half and Cronbach's Alpha correlations ranged from .88 to .96.

Test-retest reliabilities on college students by the forementioned authors and two other research groups (Rigdon & Epting, 1985; Rainey & Epting, 1977) were performed over periods of four to nine weeks. Correlations on all of the studies ranged from .64 to .90 indicating that the Threat Index yields scores which are stable over one and two month periods of time.

Three separate studies demonstrated that the Threat Index is largely free of social desirability bias and extreme attempts to appear well-adjusted (Moore & Neimeyer, 1991; Dattel & Neimeyer, 1990; Krieger, et al., 1979). Discriminant validity correlations between the tests had values ranging from $-.01$ to $-.08$ for populations of college students and mixed adult samples.

Convergent validity between the Threat Index and a number of commonly used death and dying measures was demonstrated in eleven studies from 1977 to 1990 (Neimeyer &

Epting, 1992). In varying populations (high school and college students, crisis workers, adults, ministers, and community agency groups) the Threat Index showed convergent validity correlations of .21 and .58 with eight frequently utilized tests of death and dying.

Construct validity concerns were addressed in eleven studies dating between 1977 and 1989. College students, medical and hospice patients, physicians, medical students, death pre-planners, and students of death education courses scored in the predictable direction based on religious orientation (Tobacyk, 1984), disclosive behaviors (Eggerman & Dustin, 1985) severity of illness (Hendon & Epting, 1989), presence of denial (Neimeyer, Behnke & Reiss, 1984), occupation (Rainey & Epting, 1977), and after exposure to threatening situations (Lantzy & Thornton. 1982).

Unlike the Fear of Death Scale (Collett-Lester, 1969) and the Death Anxiety Scale (Templer, 1970), the Threat Index has shown no consistent gender differences on death attitudes (Neimeyer & Epting, 1992). In fact, the Threat Index has been utilized as a tool to allow researchers to explore potential reasons why females obtain higher death anxiety/fear scores than males on most tests.

The Threat Index was used to test for emotional versus cognitive responses to death stimuli (Lantzy & Thornton, 1982) and to test for gender differences in "emotional expressiveness" (Dattel & Neimeyer, 1990). Thus far, the

results have been inconclusive but suggest that other factors (i.e. locus of control) may account for the obtained gender differences in scores (Neimeyer, 1988).

The Threat Index has been correlated to traditional Judeo-Christian religious orientations in some studies (Ingram & Leitner, 1989; Tobacyk, 1984) but studies have largely ignored alternative religious beliefs (i.e. Muslim, Hindu). Other researchers are even focusing on strength of religious (or atheist) belief as the key predictor of death threat (Moore & Neimeyer, 1991; Ingram & Leitner, 1989). Furthermore, researchers (Neimeyer, Bagley & Moore, 1986) seem to be moving away from simply assessing the positive or negative valence of death beliefs and are moving toward using the Threat Index to explore more qualitative research questions such as, "What is the actual structure of this individual's death beliefs?"

The Threat Index has also been utilized to assess the sense of self-actualization that respondents feel. Researchers (Wood & Robinson, 1982; Neimeyer & Chapman, 1980) have correlated high TI-actualization scores on the Threat Index (few self-ideal self splits) with the Death Anxiety Scale and to three of the four subscales of the Collett-Lester Fear of Death Scale. Results from later studies using both TI-actualization and TI-death threat scores (Robinson & Wood, 1983; Neimeyer, 1985) showed that using both scores did not appreciably add to the prediction

of death attitudes (although both were significantly related to different aspects of death anxiety).

Subjects

Three distinct, naturally occurring groups composed of 144 people participated in this study. Group 1 consisted of 38 hospice trainees. Group 2 contained 73 experienced hospice volunteers and Group 3 was composed of 33 non-hospice volunteers.

Hospice Trainees

Thirty-eight hospice volunteers-in-training comprised the first grouping in this study and were defined as those people currently attending hospice training workshops for the purpose of becoming hospice volunteers. Hospice of North Central Florida recruits volunteers through media advertising, outreach programs, and word-of-mouth, and conducts monthly volunteer training workshops at various locations in northern Florida. Typically trained in classes of 10 - 25, trainees first complete application forms and are personally interviewed to assess motivation, emotional maturity, and philosophical compatibility.

Hospice trainees are educated over an extended period of time using audiovisual, didactic, and experiential methods. They are taught the hospice philosophy, as well as the physical and psychological issues involved in caring for the terminally ill. Somewhat surprisingly, only 6 of 38 hospice trainees in this investigation cited salient

personal experience with death (i.e., cancer diagnosis, death of family member) as a factor in their decision to become hospice volunteers (15.8%).

Experienced Hospice Volunteers

Seventy-three experienced hospice volunteers made up the largest grouping in this study. These experienced hospice volunteers were operationally defined as those volunteers with at least one year of patient care experience and at least one patient served. As a group, a wide spectrum of hospice experience was represented with the number of patients seen varying from 1 to 80 and length of service up to 10 years. The median values were six patients seen and two years of service. Two-thirds of this group had been hospice volunteers for less than four years.

Only those volunteers whose work was familiar to both the hospice volunteer coordinator and assistant volunteer coordinator were used in this study. Hospice of North Central Florida currently has over 200 trained volunteers to serve the terminally ill from 11 counties in northern Florida. At any one time, roughly half of them are active within the hospice system.

Volunteers are assigned one primary patient and work as part of a hospice team (nurse, social worker, chaplain, bereavement counselor) in providing services to that patient and family. Thirty-five of 73 experienced volunteers in this study cited salient, personal experience with death as

a precipitating factor in their decision to become involved with hospice (47.9%).

Non-Hospice Volunteers

The final group was a general community volunteer group of 33 people who served in non-hospice related agencies and who attended hospice-sponsored presentations. Hospice is frequently invited by community agencies to present educational information pertaining to terminal illness, bereavement, and support resources. This group of volunteers attended these hospice presentations.

These non-hospice volunteers provide services to citizens who are sick, shut-in, or recently bereaved. They were selected to participate in this study based on the shared similarities of clientele and volunteer activities with the hospice volunteers. The non-hospice volunteer group served primarily as a control group for hospice trainees.

Group Differences

The groups were compared on a number of non-test score variables (test administration differences, demographic differences) to assess for any significant group differences that potentially could confound the test results. First, comparisons were made between the groups on test administration method.

Data from these three subject groups were collected between April 1992 and March 1993 incorporating both group

administrations and bulk mailings of the test packets. Group administrations took place at various locations in and around Gainesville, Florida. Table 1 describes the three groups of research participants, the data collection dates, the number of subjects taking part in each procedure, and the administrative method used to collect the data.

Table 1

Subject Groups and Methods of Test Administration

<u>GROUPS (subgroups)</u>	<u>N</u>	<u>METHOD</u>
Hospice Trainees		
Gainesville Training (4/92)	19	Group
Gainesville Training (3/93)	5	Mail
Palatka Training (4/92)	6	Group
Satsumo Training (6/92)	<u>8</u>	Group
Total Hospice Trainees	38	
Experienced Hospice Volunteers		
Mailouts (8/92)	46	Mail
Gainesville Volunteer Meeting (4/92)	12	Group
Keystone Heights Meeting (4/92)	8	Group
Satsumo Volunteer Meeting (5/92)	<u>7</u>	Group
Total Experienced Volunteers	73	
Non-Hospice Volunteers		
Lake City Medical Club (7/92)	8	Group
Lake City Hospital Group (7/92)	6	Group
Meals on Wheels-Gainesville (8/92)	10	Mail
Widowed Persons-Gainesville (6/92)	<u>9</u>	Group
Total Non-Hospice Volunteers	33	

A large discrepancy in the method by which data were collected was noted between the three groups. Whereas the majority of experienced hospice volunteers (46 out of 73) were sampled by mailed test packets (63.0%) rather than in a group situation, only 5 out of 38 hospice trainees (13.2%)

and 10 out of 33 non-hospice volunteers (30.3%) were sampled by mail.

A Chi-square procedure was performed comparing the three groups on test administration rates. The resulting $\chi^2(2, N = 144) = 28.4, p < .001$ indicated strong evidence that test administration differences were associated with the three groups. Compared to hospice trainees and non-hospice volunteers, significantly more experienced hospice volunteers responded to mailed test packets rather than group-administered test packets.

As noted previously, hospice trainees and experienced hospice volunteers appeared to differ in the percentage who cited personal death experience as a key factor in the decision to become involved with hospice (hospice trainees = 15.8%; experienced hospice volunteers = 47.9%). No attempt was made to assess non-hospice volunteers on this issue. The resulting $\chi^2(1, N = 111) = 11.1, p < .001$ indicated that group membership was significantly associated with how important prior death experience was in deciding to become involved with hospice.

Using a demographic information page (see Appendix B), seven demographic variables were obtained from each research participant: marital status; gender; household income; education level; religiosity; age; and occupation. Descriptive statistics were computed for each group to determine whether any obvious group differences existed

on any of these seven variables. The simple frequencies and percentages for all demographic variables except age and occupation are included in Table 2.

Table 2

Descriptive Group Demographic Information

VARIABLE	GROUP 1		GROUP 2		GROUP 3	
	N	%	N	%	N	%
Marital Status						
Married	19	50.0	42	57.5	19	57.6
Divorced	4	10.5	7	9.6	1	3.0
Single	12	31.6	10	13.7	0	0.0
Widowed	3	7.9	13	17.8	13	39.4
Totals	38	100.0	72	98.6	33	100.0
Gender						
Female	33	86.8	65	89.0	25	75.8
Male	5	13.2	8	11.0	8	24.2
Totals	38	100.0	73	100.0	33	100.0
Household Income						
< \$10,000	5	13.2	11	15.1	4	12.1
\$10 - \$19,999	5	13.2	12	16.4	9	27.3
\$20 - \$29,999	7	18.4	11	15.1	7	21.2
\$30 - \$39,999	11	28.9	13	17.8	6	18.2
\$40 - \$49,000	2	5.3	9	12.3	1	3.0
> \$50,000	7	18.4	12	16.4	2	6.1
Totals	37	97.4	68	93.1	29	87.9
Education Level						
≤ 12 years	7	18.4	19	26.0	10	30.3
13 -16 years	20	52.6	33	45.2	17	51.5
> 16 years	11	28.9	20	27.4	5	15.2
Totals	38	99.9	72	98.6	32	97.0
Religiosity						
Yes	20	52.6	46	63.0	24	72.7
No	17	44.7	24	32.9	8	24.2
Totals	37	97.3	70	95.9	32	96.9

As can be seen from the data given above, the modal research participant, regardless of group, was female, married, college-educated, and religious. In fact,

household income was the only variable that did not have consistent modal values across the three groups.

Modal household income for hospice trainees and experienced hospice volunteers was between \$30,000 - \$39,000. The modal household income for non-hospice volunteers was between \$10,000 and \$19,000. Although the groups appeared to have generally similar modal values, group differences on these five variables were statistically assessed using a Chi-square procedure.

Five Chi-square tests were performed between the groups on each of the five demographic variables listed above to check for statistical independence. With a $\chi^2(6, N = 143) = 22.25$, $p < .01$, only marital status showed a significant effect indicating that, of the five variables checked, strong evidence existed that only marital status differences were associated with group membership.

However, large group discrepancies were readily apparent with the other two demographic variables (age and occupation). To test for apparent group differences in age, z test statistics comparing the groups' mean ages were performed, with each of the three group comparisons showing significant group differences. Table 3 depicts the mean ages for the three groups, standard deviations, group comparisons, z scores, and p values.

Table 3

Mean Ages for Groups and Z Score Comparisons

GROUP	AGE MEAN	SD	COMPARISON	Z SCORE	p VALUE
1	40.0	14.2	1 vs. 2	-4.90	.0001
2	54.2	14.9	2 vs. 3	-6.67	.0001
3	69.3	7.8	3 vs. 1	10.93	.0001

Average age for the hospice trainees (Group 1) was 40.0 with a SD of 14.2. The experienced hospice volunteers' (Group 2) mean age was 54.2 with a SD of 14.9. The non-hospice volunteers' (Group 3) mean age was 69.3 with a SD of 7.8. The group comparisons all attained significant p-values ($p < .0001$) indicating that there were significant differences in the mean ages of each group. The non-hospice volunteers were significantly older than the experienced hospice volunteers who were, in turn, significantly older than the hospice trainees.

As mentioned earlier, the occupational status of the 144 participants in this study also showed obvious group differences. Self-reported occupations from the sample's 144 respondents were merged into four broad occupational categories: employed; full-time student; retired; and homemaker. Simple frequency counts and percentages were then computed for each group. Included in Table 4 are the frequencies and percentages of occupational categories for each of the three groups.

Table 4

Descriptive Group Occupational Information

OCCUPATIONAL STATUS	GROUP 1		GROUP 2		GROUP 3	
	N	%	N	%	N	%
Employed	26	68.4	29	39.7	5	16.1
Full-Time Student	6	15.8	5	6.8	0	0.0
Retired	2	5.3	23	31.5	22	71.0
Homemaker	4	10.5	16	21.9	4	12.9
Totals	38	100.0	73	99.9	31	100.0

The modal occupational category of Group 1 (hospice trainees) and Group 2 (experienced hospice volunteers) was employed (68.4% and 39.7% respectively). However, the modal occupational status for Group 3 (non-hospice volunteers) was retired (71%). In fact, 32.6% of the total sample were retired (47 out of 144) compared to 71% of the non-hospice volunteers (Group 3) and 5.3% of the hospice trainees (Group 1) identified as such.

Group 3 (non-hospice volunteers) was the only group to have no identified students. Group 2 (experienced hospice volunteers) also had the largest percentage of their members identified as homemakers (16 out of 73, 21.9%). It seems probable that significant age differences between groups contributed to these group occupational differences.

A Chi-square test was performed between group and occupational status to check for statistical independence. The resulting $\chi^2(6, N = 144) = 41.61, p < .001$ indicated

strong evidence that a person's occupational status was associated with group membership.

To summarize, group membership was significantly associated with test administration methods, the importance of prior death experience in the decision to become involved in hospice, marital status, and occupational status. In addition, significant differences were found in the mean ages for each of the three groups. The effects of administration method and demographic variables on subsequent test scores will be explored in Chapter IV.

Procedure

All participants in this study were administered a packet containing an informed consent form, the Death Anxiety Scale (DAS), Purpose in Life Test (PIL), the Threat Index, and the previously described general demographics page. The entire package was typically completed in 25 - 40 minutes. These test packets were either mass-administered in meetings or mailed individually to all participants.

In all, four primary test scores were generated with each completed test packet (DAS, PIL, TI-actualization, and TI-death threat). In addition, four supplemental scores from the Threat Index were computed (Death-accepting, Death-threatened, Depressed, and Death-attracted). The scoring criteria for each test were outlined earlier in this chapter.

Hospice trainees were screened and invited to participate in regional training workshops. The training involved a commitment of six consecutive Tuesday evenings from 6-9 p.m. Test packets were group-administered during the first workshop evening prior to any hospice training. During the spring and early summer of 1992, every trainee from three different training classes completed the packet (total of 33). Because the primary investigator was no longer living in Gainesville, a fourth training group during the spring of 1993 was given 12 test packets during the first training session and requested to mail them back at a later date. Five test packets were returned (41.7%). The hospice trainee group consisted of 38 members.

Experienced hospice volunteers can attend semi-monthly patient care meetings sponsored by hospice staff in various locations. Agency information, volunteer activities, and patient concerns are shared during these informal meetings. The test packet was group-administered to the 27 participants who attended three separate meetings. Every volunteer who attended the three meetings completed the questionnaire.

However, not all experienced hospice volunteers attended the semi-monthly patient care meetings. Thus, 76 mailouts were sent to volunteers not attending the patient care meetings and 48 completed questionnaires were returned (63.2%). Two of the returned test packets were from very

recent volunteers who were not well-known to either the hospice volunteer coordinator or to his assistant and were not included. Altogether, 73 experienced hospice volunteers were included in the current study.

The majority of non-hospice volunteers received the test packets during regularly scheduled monthly volunteer meetings. Several community organizations (e.g., Lake City Medical Club, Lake City Hospital Group, Widowed Persons Support Group) had invited hospice to give presentations to their volunteers on hospice services, distribute educational materials, and answer relevant questions. All participants in the meetings completed the questionnaires (total of 23). In addition, the Meals-on-Wheels group was given 25 test packets prior to making their appointed delivery rounds and 10 completed forms were later returned to the Meals-on-Wheels supervisor (40% return rate). A total of 33 non-hospice volunteers were included in this study.

A volunteer coordinator (Supervisor A) and an assistant volunteer coordinator (Supervisor B) supervise the volunteer program at the Hospice of North Central Florida. Both were interested in the current project and were enthusiastic about the prospect of correlating a thanatology instrument with volunteer caregiver performance. The volunteer coordinators claimed that the Hospice of North Central Florida had no systematic method of evaluating volunteers

and both felt strongly that participating in this project had positive ramifications for their program.

The two volunteer coordinators were provided a list of the 75 experienced hospice volunteers who had completed the questionnaires. To be included in the study, both volunteer coordinators had to be familiar with each of the experienced volunteer's work at hospice so that two performance ratings could be generated for each volunteer (one from each volunteer supervisor). The vast majority of experienced hospice volunteers who completed the test packets were well-known to both coordinators (73 out of 75) and included in this phase of the study.

The volunteer coordinators were then instructed to independently rate the caregiver performance of these 73 volunteers on a five-point ordinal scale based upon their personal knowledge of each volunteer's performance as a hospice caregiver. These were obviously very general and highly personalized ratings. The volunteer coordinators needed only a working knowledge of each volunteer's hospice performance and an awareness that a "5" rating represented superior performance with each lower rating representing progressively lower performance.

To ensure a broad range of scores, each coordinator was given the additional instruction to evenly distribute the volunteer ratings so that nearly equal numbers would be found under each global rating (top 20% were given a "5"

rating; next 20% = "4"; middle 20% = "3"; next to last 20% = "2"; and last 20% = "1"). This format was used to decrease the tendency to rate all volunteers as 4's or 5's and ensured an equal distribution of rating scores. This format also seemed to assuage the coordinators' fears of evaluating any volunteer as "a poor performer" since all five ratings could be considered gradations of adequate performance.

Without conferring with one another, or knowing the test results of experienced hospice volunteers, the volunteer coordinators rated the experienced volunteers, placing them in a distribution of approximately 15 volunteers per rating (5 ratings for 73 members). A significant Spearman correlation was found between the two sets of volunteer coordinators' ratings ($\rho = .5881$, $p < .0001$).

Although the Spearman correlation was statistically significant, only 34.5% of the variance of one coordinator's ratings was associated with change in the other's. This degree of association was not high enough to allow a merging of the two ratings (need to account for at least 50% of the variance), so the coordinators' ratings were kept separate. As a result, each volunteer had two scores (one from each volunteer coordinator) ranging from one to five.

Statistical Analyses

The first hypothesis states that significant relationships exist between the two primary scores of the

Threat Index (TI-actualization and TI-death threat) and the obtained scores on the Death Anxiety Scale (DAS) and the Purpose in Life Test (PIL) in this sample of 144 hospice trainees, experienced hospice volunteers, and non-hospice volunteers. To test the first hypothesis, Pearson correlations were performed between the TI-actualization score and the DAS, the TI-actualization score and the PIL, the TI-death threat score and the DAS, and the TI-death threat score and the PIL for the entire sample of 144 subjects.

The second hypothesis states that significant differences in the DAS, PIL, and Threat Index scores exist between hospice trainees and non-hospice volunteers. To test the second hypothesis, t tests were used to look for significant differences in DAS, PIL, TI-actualization, TI-death threat, and four supplemental Threat Index scores between the hospice trainee group and the non-hospice volunteer control group.

The final hypothesis states that a significant relationship exists between the two primary Threat Index scores (TI-actualization and TI-death threat) and the performance ratings given to experienced hospice volunteers by their supervisors (A and B). To test this hypothesis, Spearman correlations were computed between TI-actualization scores, Supervisor A's ratings, and Supervisor B's ratings and between TI-death threat scores, Supervisor A's ratings,

Supervisor B's ratings. All of the above analyses were conducted using the Statistical Analysis System (SAS Institute, 1982).

CHAPTER IV RESULTS

General Findings

Means, standard deviations, and score ranges were computed for every variable to ensure that scores and values were appropriately encoded and accurately reflected the possible range of values. Spot checks were also made between raw data and computer-inputted data to ensure that reliable transformation of test protocols took place. Test results for the entire sample are contained in Table 5.

Table 5

DAS, PIL, and Threat Index Test Results of the Entire Sample

VARIABLE	N	MEAN	SD	RANGE
DAS	144	4.79	2.54	0 - 13
PIL	144	113.87	15.54	37 - 140
TI-actualization	135	2.58	3.15	0 - 20
TI-death Threat	133	9.23	9.19	0 - 36
Death-accepting	130	26.32	10.59	0 - 40
Death-threatened	128	8.00	9.23	0 - 36
Depressed	128	1.02	1.53	0 - 6
Death-attracted	128	1.52	2.34	0 - 15

The means, standard deviations, and ranges of scores on the Death Anxiety Scale (one score), the Purpose in Life Test (one score), and the Threat Index (six scores) were within expectations for this sample of 144 hospice trainees,

experienced hospice volunteers, and non-hospice volunteers. Compared to the previously cited DAS and PIL normative data in Chapter III, this global sample endorsed a low average amount of death anxiety (DAS \bar{M} = 4.79, \underline{SD} = 2.54) and a high sense of purpose (PIL \bar{M} = 113.87, \underline{SD} = 15.54).

Results from the two primary scores on the Threat Index (TI-actualization, TI-death threat) also seem to suggest an overall high sense of actualization (\bar{M} = 2.58 splits) and low death threat (\bar{M} = 9.23 splits). Krieger, Epting, and Hays (1979) suggested that scores of 20 would be good approximations of normal levels of these traits. This global sample's splits were well below expectations (extremely well-adjusted).

Means of the four supplemental Threat Index scores (Death-accepting, Death-threatened, Depressed, Death-attracted) for the entire group generally seem to reflect a strong sense of death-acceptance, a moderate degree of death threat, and minimal depression or death-attraction. Clearly, this sample of hospice and non-hospice personnel has a number of positive attributes.

DAS, PIL, and Threat Index mean scores for each of the three groups were also calculated separately. The summary statistics for hospice trainees, experienced hospice volunteers, and non-hospice volunteers have been recorded below in Table 6.

Table 6

DAS, PIL, and Threat Index Results for the Three Groups

<u>GROUP (TESTS)</u>	<u>N</u>	<u>MEAN</u>	<u>SD</u>	<u>RANGE</u>
<u>Hospice Trainees</u>				
DAS	38	5.34	2.61	0 - 11
PIL	38	113.32	13.44	63 - 134
TI-actualization	38	3.13	3.76	0 - 20
TI-death threat	38	9.39	7.81	0 - 31
Death-accepting	38	26.95	7.64	7 - 39
Death-threatened	38	7.45	7.90	0 - 30
Depressed	38	1.08	1.36	0 - 5
Death-attracted	38	2.13	3.21	0 - 15
<u>Hospice Volunteers</u>				
DAS	73	4.48	2.26	0 - 9
PIL	73	116.44	13.75	72 - 140
TI-actualization	69	2.19	2.89	0 - 12
TI-death threat	67	8.67	9.39	0 - 36
Death-accepting	67	26.69	11.06	0 - 40
Death-threatened	65	7.63	9.35	0 - 34
Depressed	65	0.89	1.63	0 - 6
Death-attracted	65	1.20	1.79	0 - 7
<u>Non-Hospice Volunteers</u>				
DAS	33	4.88	3.00	0 - 13
PIL	33	108.82	20.11	37 - 139
TI-actualization	28	2.79	2.83	0 - 10
TI-death threat	28	10.32	10.56	0 - 36
Death-accepting	25	24.36	13.08	0 - 40
Death-threatened	25	9.80	10.85	0 - 36
Depressed	25	1.24	1.51	0 - 4
Death-attracted	25	1.40	1.96	0 - 7

At first glance, the eight test scores showed very few obvious group differences. Consistent with the total sample's test results, each of the three groups showed average levels of death anxiety and an average to above average level of purposefulness. Again, all three groups were highly actualized, had moderate levels of death threat, were generally death-accepting, and had negligible levels of

depression or death-attraction. These three groups appeared to be much more alike than different when comparing the scores from the three tests.

Administrative Effects

As was noted in Chapter III, the groups showed significant differences in how they were administered the test packets. T score (small group inference) and Z score (large group inference) comparisons were performed on each of the three groups (hospice trainees, experienced hospice volunteers, and non-hospice volunteers) and on the entire sample to determine whether mean test score differences were present between those subjects who were mailed the tests and those who were mass-administered the tests.

The only administrative effect found was on the TI-actualization scores of hospice trainees (Group 1). The resulting $t(36) = 1.96$, $**p < .05$ indicated that hospice trainees who were mass-administered the test packets tended to endorse more actualization splits (feel less actualized) than those who were mailed the test packet (mass-administered group $M = 3.45$, $SD = 2.72$; mail group $M = 1.0$, $SD = 1.22$). Although this represented a statistical difference, both groups of hospice trainees were highly actualized (had few TI-actualization splits).

None of the other comparison groups (experienced hospice volunteers, non-hospice volunteers, or the total sample) showed any significant differences in test scores

between those administered the tests in groups and those receiving the tests in the mail. On the whole, there was little evidence that administrative method had any meaningful effect on the mean test scores of the groups or of the entire sample.

Demographic Effects on Test Scores

Before addressing the three hypotheses, demographic effects on the eight test scores (DAS, PIL, TI-actualization, TI-death threat, four supplemental Threat Index scores) were analyzed using Pearson correlations (age effects), Spearman correlations (education, household income), and t tests (gender, marital status, religiosity).

Two of the eight Pearson correlations for age and test score were found to be significant. Table 7 includes the test scores significantly correlated with age.

Table 7

Significant Correlations Between Demographics and Tests

<u>VARIABLES</u>	<u>CORRELATION</u>	<u>PROBABILITY</u>
Age - TI-actualization	-.2249	.0095
Age - Death-attracted	-.2398	.0071

Table 7 illustrates that TI-actualization and the Death-attracted score of the Threat Index were significantly correlated with age. Both correlations were negative and indicated that, as people's ages increased, fewer TI-actualization splits (stronger sense of actualization) and

lower Death-attracted scores occurred (less hypothesized suicidality). These associations were quite weak, with only 5.06% of the variance in TI-actualization scores and 5.75% of the variance in Death-attracted scores associated with changes in age.

Spearman correlations were computed between the eight test scores and the ordinal variables of education (3 levels) and household income (6 levels). The Education - Death-accepting Spearman correlation was the only significant value found out of 16 possible correlations ($\rho = .1795$, $p = .0314$). This positive correlation indicated that higher death-acceptance was associated with more education. Although statistically significant, only 3.22% of the variance in Death-accepting scores was associated with changes in education.

Finally, t test comparisons were used to determine whether gender, marital status, and religiosity had any effect on test scores. Significant gender differences were noted only on the PIL with $t(21.9) = 2.23$, $**p = .0365$). Females endorsed higher PIL scores (PIL $M = 115.49$, $SD = 13.37$) than did males (PIL $M = 102.90$, $SD = 25.29$). None of the 48 comparisons between the eight test scores and marital status (4 levels) were found to have significant differences. Marital status did not appear to have a marked effect on test scores.

Religiosity did have a widespread effect on test scores as six of eight t tests comparisons revealed significant differences. Table 8 describes the tests, T values, df , and p values for the variable of religiosity.

Table 8

T-Test Comparisons of Religiosity's Effect of Test Scores

<u>TEST SCORE</u>	<u>T-VALUE</u>	<u>DF</u>	<u>P-VALUE</u>
DAS	-2.5793	137	.0109
PIL	4.2073	137	.0001
TI-actualization	-2.1356	137	.0344
TI-death threat	-3.2936	137	.0012
Death-accepting	0.5612	133.2	.5756
Death-threatened	-2.8491	90.8	.0054
Depressed	-1.2335	137	.2194
Death-attracted	-2.1726	137	.0315

As can be seen in Table 8, all of the primary test scores used in this study (DAS, PIL, TI-actualization, TI-death threat) and two of the supplemental Threat Index scores (Death-threatened, Death-attracted) showed a significant religiosity effect.

The DAS $t(137) = -2.5793$, $**p < .0109$ was significant and indicated that those who were religious ($N = 90$) scored significantly lower on the DAS (DAS $M = 4.43$, $SD = 2.43$) than those who did not identify themselves as religious ($N = 49$, DAS $M = 5.54$, $SD = 2.58$). Although a statistical

difference was found between the two groups, both the religious and the non-religious appeared to have generally low levels of death anxiety (as measured by the DAS).

A significant t value on the PIL of $t(137) = 4.2073$, $**p = .0001$ indicated that those who were religious scored significantly higher on the PIL (PIL $M = 117.81$, $SD = 13.92$) than those who did not identify themselves as religious (PIL $M = 106.72$, $SD = 17.40$). The religious tended to have a very high sense of purpose (as measured by the PIL) compared to the average levels of purposefulness endorsed by the non-religious.

A significant t value on the TI-actualization score of $t(137) = -2.1356$, $**p = 0.0344$ indicated that those who were religious had fewer TI-actualization splits (TI-actualization $M = 1.92$, $SD = 3.05$) than those who did not consider themselves religious (TI-actualization $M = 3.07$, $SD = 3.27$). However, both groups clearly showed high levels self-actualization (few TI-actualization splits).

The significant t value on the TI-death threat score of $t(137) = -3.2936$, $**p = .0012$ indicated that those who were religious had fewer TI-death threat splits (TI-death threat $M = 6.54$, $SD = 8.25$) than those who did not consider themselves religious (TI-death threat $M = 11.61$, $SD = 9.98$). This statistical difference between the religious and the nonreligious also appeared to have some clinical utility, with the nonreligious mean TI-death threat score (11.61

splits) representing one of the highest Threat Index scores obtained in this entire sample.

A significant t value on the supplemental Death-threatened score of $t(90.8) = -2.8491$, $**p = .0054$ indicated that those who were religious had fewer Death-threatened splits (Death-threatened $M = 5.26$, $SD = 7.95$) than those who did not consider themselves religious (Death-threatened $M = 9.91$, $SD = 10.30$). As expected, this supplemental Threat Index score closely mirrored the results of the TI-death threat score and appeared to reflect an important difference between these two groups.

The final significant t value found was on the supplemental Death-attracted score. The resulting $t(137) = -2.1726$, $**p = .0315$ indicated that those who were religious had fewer Death-attracted splits (Death-attracted $M = 0.91$, $SD = 2.20$) than those who were not religious (Death-attracted $M = 1.78$, $SD = 2.50$). This finding is of little apparent clinical usefulness as both groups had minimal levels of death-attraction (hypothesized suicidality).

Two t test comparisons yielded no significant differences between the religious and nonreligious on the supplemental Death-accepting or the Depressed scores of the Threat Index.

Of note, the majority of demographic variables assessed (age, education, household income, and marital status) had few, if any, significant associations with the eight test

scores. When significant relationships were found, they accounted for little of the variance in scores.

The PIL was shown to have a gender and a religiosity effect that resulted in easily observed, meaningful differences in test scores. Clearly the highest PIL scores were obtained by females and by the religious. Religiosity also appeared to have a clinically meaningful effect on two of the eight Threat Index scores (TI-death threat, Death-threatened). The effect of religiosity appeared to have more of an impact on test scores than any other demographic variables. The test results specifically addressing the three hypotheses will now be addressed.

Hypothesis One

The first hypothesis stated that significant relationships exist between the two primary scores of the Threat Index (TI-actualization, TI-death threat) and the obtained scores on the Death Anxiety Scale (DAS) and the Purpose in Life Test (PIL) for this global sample of hospice trainees, experienced hospice volunteers, and non-hospice volunteers.

These two Threat Index scores proved to be significant predictors of DAS and PIL scores as Pearson correlations were computed and three of four correlations were found to have significant r values. Table 9 describes the four test score comparisons, r values, and p -values.

Table 9

Correlations Between the Threat Index, DAS, and PIL Scores

<u>TEST COMPARISONS</u>	<u>r</u>	<u>p</u>
TI-actualization - DAS	.2231	.0093
TI-actualization - PIL	-.4889	.0001
TI-death threat - DAS	.3004	.0004
TI-death threat - PIL	-.1400	.1080

As can be seen in Table 9, three out of four test comparisons resulted in significant correlations. TI-actualization showed a positive correlation ($\underline{r} = .2231$, $\underline{p} = .0093$) with the Death Anxiety Scale (DAS). As TI-actualization splits increased (lower self-actualization), so did DAS scores (higher death anxiety). This correlation, although statistically significant, was a weak one with only 4.98% of the variance in the DAS scores associated with changes in the TI-actualization scores.

TI-actualization showed a significant negative correlation ($\underline{r} = -.4889$, $\underline{p} = 0.0001$) with the Purpose in Life Test (PIL) indicative of an inverse relationship between these two scores. Few TI-actualization splits (high self-actualization) were associated with high purpose in life. This correlation represented a robust relationship between these two test scores, with 23.90% of the variance in PIL scores associated with changes in the TI-actualization scores.

TI-death threat showed a significant positive correlation ($r = .3004$, $p = .0004$) with the DAS. High death threat (many splits) was associated with high death anxiety. This correlation was also a relatively weak association with only 9.02% of the variance in DAS scores associated with changes in the TI-death threat scores.

Finally, TI-death threat was not significantly associated with PIL scores ($r = -.1400$, $p = .1080$).

Hypothesis Two

The second hypothesis stated that significant differences in DAS, PIL, and the six Threat Index mean scores exist between hospice trainees and non-hospice volunteers. This hypothesis tested whether any of these three tests could identify traits that would discriminate hospice trainees from non-hospice volunteers. It was hoped that one of the tests would be effective in screening potential hospice volunteers.

Using t test procedures, the two groups were compared on the Death Anxiety Scale (DAS), Purpose in Life Test (PIL), and the Threat Index (two primary scores and four supplemental scores) and shown to have no significant differences in mean scores on any of the measures utilized in this study. Table 10 describes the t test results of Group 1 (hospice trainees) and Group 3 (non-hospice volunteers) on each of the eight test scores.

Table 10

T-Test Comparisons Of Test Scores of Group 1 and Group 3

<u>TEST</u>	<u>t</u>	<u>df</u>	<u>p</u>
Death Anxiety Scale	.6960	69	.4888
Purpose in Life Test	1.0905	54.5	.2803
TI-actualization	.4087	64	.6842
TI-death threat	-.4101	64	.6831
Death-accepting	.8940	34.9	.3774
Death-threatened	-.9961	61	.3231
Depressed	-.4398	61	.6616
Death-attracted	1.1237	60.7	.2656

To summarize, t test comparisons of the hospice trainee and non-hospice volunteer mean scores on the DAS, PIL and the Threat Index were ineffective in discriminating between these two groups.

In ancillary analyses, t tests were also used to compare Group 1 (hospice trainees) and Group 2 (experienced hospice volunteers) and Group 2 (experienced hospice volunteers) and Group 3 (non-hospice volunteers) on these eight test scores. No significant t values were obtained on any of the sixteen t test comparisons. These three tests were clearly unable to effectively discriminate any of these three groups of subjects.

Hypothesis Three

The third hypothesis stated that significant relationships exist between the two primary Threat Index scores (TI-actualization, TI-death threat) and the performance ratings given to the experienced hospice volunteers by two volunteer coordinators (Supervisor A and Supervisor B). This hypothesis tested whether the Threat Index might be useful as a measure of performance for existing hospice volunteers.

A Spearman correlation procedure was performed between the volunteer coordinator ratings and the two primary Threat Index scores to assess the relationship between these variables. The correlation between the two volunteer coordinator's ratings reached statistical significance ($\rho = .5881$, $p = .0001$), but was not large enough to justify merging the ratings. As a result, each set of ratings was separately correlated with the test scores with the ρ values and probabilities included in Table 11 below.

Table 11

Spearman Correlations Between Supervisors and Threat Index

<u>VARIABLES</u>	<u>RHO</u>	<u>P-VALUE</u>
Supervisor A - Supervisor B	.5881	.0001
Supervisor A - TI-actualization	-.1477	.2125
Supervisor A - TI-death threat	-.1563	.1867
Supervisor B - TI-actualization	-.2042	.0831
Supervisor B - TI-death threat	-.2108	.0734

As can be seen in Table 11, neither the TI-actualization score nor the TI-death threat score was significantly associated with supervisory ratings (Supervisor A or B). However, an ancillary analysis correlating the performance ratings with the four supplemental Threat Index scores resulted in significant correlations between the Death-accepting score of the Threat Index and both raters (Supervisor A - Death-accepting $\rho = .5634$, $p = .0001$; Supervisor B - Death-accepting $\rho = .4359$, $p = .0001$).

Although the performance ratings of experienced hospice volunteers were unrelated to TI-actualization and TI-death threat scores, one supplemental Threat Index score (Death-accepting) had a significant positive correlation with both raters. These correlations were also of some clinical relevance as 31.74% of the variance in Supervisor A's ratings and 19.00% of the variance in Supervisor B's ratings were associated with changes in the Death-accepting score. Those experienced hospice volunteers rated highly by the volunteer coordinators were likely to have high death-acceptance.

Summary of Findings for the Three Hypotheses

Results of the first hypothesis showed that TI-actualization and TI-death threat scores of the Threat Index were significant correlated with the DAS and the PIL scores on three of four test comparisons in this global sample of

144 hospice trainees, experienced hospice volunteers, and non-hospice volunteers. TI-actualization scores were significantly related to scores on the DAS and the PIL and TI-death threat scores were significantly related to DAS scores.

As the number of TI-actualization splits increased (lower self-actualization), DAS scores increased (more death anxiety) and PIL scores decreased (lower sense of purpose). As the number of TI-death threat splits increased (more death threat), DAS scores increased (more death anxiety). Of the three significant test correlations, the TI-actualization score was best able to predict PIL scores, with 23.9% of the variance in PIL scores associated with changes in the TI-actualization scores.

Results of the second hypothesis indicated no significant differences in DAS, PIL, and Threat Index mean scores were found between hospice trainees and non-hospice volunteers. None of the eight test comparisons (DAS, PIL, TI-actualization, TI-death threat, or four supplemental Threat Index scores) showed significant t results. In fact, none of the three groups were found to significantly differ from each other on any of the test scores.

Results of the third hypothesis also showed that neither the TI-actualization nor the TI-death threat score was significantly correlated with the performance ratings of experienced hospice volunteers. However, ancillary analyses

did uncover a significant correlation between both sets of experienced hospice volunteer ratings and the Death-accepting score on the Threat Index (supplemental Threat Index score) indicating that death-acceptance among volunteers tended to increase as performance ratings increased.

CHAPTER V DISCUSSION

Rationale for the Study

Hospice provides an important service to terminally ill patients and families (Steele, 1990; Ferrell, 1985; Cameron & Parkes, 1983) and seems destined to play an increasingly larger role in health care delivery in the years ahead (Mor, 1987; Hine, 1979-80). Hospice volunteers are widely recognized as valuable members of the hospice team (Basile & Stone, 1986-87; De Vries, 1983), yet very little is known about their views on death, their sense of purpose, or the impact of their attitudes on subsequent caregiver effectiveness (Lafer, 1989; Amenta, 1984).

The research that is available on the death attitudes of "professional" health care providers seems to indicate that caregivers who are overly anxious about death or who deny its impact have difficulties responding appropriately to the emotionally-charged needs of terminally ill patients and families (Field & Howells, 1988; Eakes, 1985; Neimeyer, Behnke & Reiss, 1984). Death anxiety obviously detracts from a healthy "death surround" (Rando, 1984) seen by hospice as so critical in facilitating the coping of a patient and family facing inevitable death. To what extent

is death anxiety a problem with "nonprofessional" hospice volunteers?

Many hospice administrators recognize that carefully exploring the feelings that volunteer trainees have about death is important and most programs currently have formal candidate interviews prior to training. However, a review of the literature found few, if any, attempts to develop screening instruments for potential hospice volunteers or to investigate the link between the death attitudes of hospice volunteers and subsequent caregiver performance (Finn Paradis & Usui, 1987). The current study was conducted primarily to address these shortcomings in the literature.

The Threat Index and two other popular thanatological instruments (Death Anxiety Scale, Purpose in Life Test) were used in this study to explore three primary hypotheses. If found to be helpful in addressing the basic research questions of the current study, it was hoped that the Threat Index might prove to be a useful tool in the hands of hospice administrators seeking to put the best candidates in these stressful and demanding caregiver roles.

The present investigation has examined whether the Threat Index (based on the Personal Construct Psychology of George Kelly) could be used as an effective screening and evaluative measure for both hospice trainees and volunteers. The Threat Index was chosen because it had the strongest theoretical grounding of any thanatological instrument

(Neimeyer & Epting, 1992) and it was constructed with an inherent sensitivity to the fact that an individual's notions of death are highly idiosyncratic (Rando, 1987; Feifel, 1968; Jung, 1959).

The primary investigator also hoped that the present study would meaningfully contribute to the growing literature of thanatology. Thanatology is a field marked by multiple journals, contributing disciplines, and research foci. Yet it is also a field apparently in need of a unifying theory with which to understand past findings and to efficiently explore new research directions. Personal Construct Psychology (Kelly, 1955) has been viewed by some (Neimeyer, Epting & Krieger, 1984) as best suited to perform these tasks and the Threat Index is one of its primary tools.

Relationships Between the Test Scores: Hypothesis One

Three of four Pearson correlations between the three tests were found to be significant. These findings indicated that significant relationships exist between the primary Threat Index scores (TI-actualization, TI-death threat) and the scores on the Death Anxiety Scale (DAS) and the Purpose in Life Test (PIL) obtained from this sample of 144 hospice trainees, experienced hospice volunteers and non-hospice volunteers. These three instruments do seem to measure some common aspects of death anxiety and sense of purpose.

A high sense of actualization (few TI-actualization splits) was correlated to low death anxiety (DAS) and a high sense of purpose (PIL). A high degree of death threat (many TI-death threat splits) was correlated to high death anxiety (DAS). No significant correlation was found between TI-death threat scores and PIL scores. Although statistically significant, the three correlations had weak predictive power with roughly 5%, 24%, and 9% of the variance in one score associated with changes in the other score (respectively). Clearly, scores on the DAS and PIL were largely associated with factors not directly measured by the Threat Index.

The few studies that have been conducted with hospice volunteers have shown that scores from the Death Anxiety Scale and the Purpose in Life Test have a significant inverse relationship (Amenta, 1984; Amenta & Weiner, 1981). The results of the current study closely mirrored the above findings. However, as was the case in prior studies, the current investigation also obtained correlations with weak predictive power and will probably do little to silence critics who claim that serious methodological problems continue to confound attempts to measure death anxiety (Vargo, 1980; Dickstein, 1972).

Using Tests to Differentiate Groups: Hypothesis Two

This study found that no significant differences in DAS, PIL, and the six Threat Index mean scores exist between

hospice trainees and non-hospice volunteers. This finding raises considerable doubt as to whether any of these instruments, used in a similar way, could effectively serve as screening tools for potential volunteers.

An underlying assumption during the current investigation was that people who train to become volunteers at hospice would be clearly identifiable from others in terms of DAS, PIL, and Threat Index scores (low death anxiety, high sense of purpose, high self-actualization, low death threat, strong death-acceptance, low depression, and low suicidality). Intuitively it would seem that people who want to be involved in hospice surely realize that they will have to physically care for dying patients, assist families in crisis, and become intimately involved with someone who will soon die. For those people with high DAS scores, low PIL scores, or many Threat Index splits, less stressful volunteer placements would probably be sought.

It seemed apparent that some people would have difficulty functioning effectively in a hospice volunteer setting. Motivated and empathic volunteers in other community agencies might not even consider participating in hospice training. Volunteer coordinator screening interviews would further "weed out" inappropriate applicants. In effect, it was assumed that a hospice trainee group would be significantly different from the non-hospice group (based strictly on personality traits, not

training effects). It was further assumed that some or all of the eight test scores in this study would detect these differences.

The fact that the trainees and non-hospice volunteers were indistinguishable from each other in terms of test scores was certainly unexpected. Further confusion arose when ancillary analyses showed that none of the three groups differed on test scores. These three groups seemed to have much more in common with each other than was initially believed. At this time, significant doubt exists as to whether the death attitudes and sense of purpose of potential hospice volunteers and experienced hospice volunteers differ significantly from active, dedicated, non-hospice volunteers. Perhaps death attitudes are not the salient factors that distinguish hospice from non-hospice volunteers.

Threat Index and Volunteer Performance: Hypothesis Three

The findings of the third hypothesis indicated that no significant relationships exist between the primary Threat Index scores (TI-actualization and TI-death threat) and the supervisory performance ratings given to experienced hospice volunteers. No significant correlations were found between the primary Threat Index scores and volunteer performance ratings. This finding raises doubts as to the utility of the Threat Index as a screening measure for existing volunteers. However, an ancillary analysis showed that one

supplemental Threat Index score (Death-accepting) was significantly correlated with the performance ratings of both Supervisor A and Supervisor B.

Changes in the Death-accepting score were positively associated with 31% of the changes in Supervisor A's ratings and with 19% of the changes in Supervisor B's ratings. In other words, high performance ratings were correlated with high Death-acceptance scores. This correlation was one of the strongest relationships uncovered in this study and seemed to compliment previous studies' findings that have shown that death anxiety negatively influenced caregiver performance (Waltman, 1990; Scanlon, 1989; Feifel, 1967). Consistent, positive views of self and death were modestly predictive of high performance ratings in this sample of experienced hospice volunteers.

Only one previous study has attempted (unsuccessfully) to correlate performance with a death attitude measure (Finn Paradis & Usui, 1987). This present study's attempt to correlate scores on the Threat Index with subjective performance ratings met with only partial success (using an alternative Threat Index score). Before concluding that no strong relationship exists between volunteer performance and the primary Threat Index scores, efforts to improve the research methodology should continue. Issues related to incorporating the Threat Index in hospice settings will be addressed below.

Using the Threat Index in Hospice Populations

The unanticipated findings from this study served to reemphasize that death attitudes are multi-faceted and best understood as a collection of idiosyncratic attitudes and beliefs (i.e., fear, hope, regret, and satisfaction). The current study attempted to address this multidimensionality by using a number of diverse instruments and incorporating volunteer performance ratings. The Threat Index had not been used previously in this type of study and seemed especially well-suited to address the many components of death attitudes. The results of this study largely confirmed that using the Threat Index is at least as effective as the Death Anxiety Scale and the Purpose in Life Test in samples of hospice volunteers.

Only a handful of studies have been conducted on the death attitudes of hospice volunteers. Because of this, research questions have been quite basic and have struggled to find solid statistical support. The results of the current study unfortunately followed a similar pattern. Research questions aimed at hospice volunteer characteristics need to mature and become more focused and testable. The Threat Index still seems to be an instrument that could address the research needs of hospice.

For instance, instead of using subjective performance ratings, hospice studies might investigate the relationship between Threat Index scores and specific caregiver behaviors

(i.e., touching, empathic statements) or easily quantifiable volunteer drop-out rates. The alternative Threat Index scores also give this instrument unique avenues of investigation that were only partially explored in the current study. It seems premature to assume that the needs of hospice to screen and evaluate volunteers can not be met using the Threat Index.

A major tenet of personal construct theory holds that people create and modify meaning from their environments in idiosyncratic ways. Perhaps using the Threat Index in a more qualitative manner would have helped differentiate these groups. To use this instrument only in terms of number of splits probably served to lose valuable information that could have helped differentiate these three groups. The Threat Index may prove to be a useful tool in the future if researchers use it in more creative ways.

Possible Reasons For No Group Differences

The three groups used in this study differed statistically on a number of characteristics (administrative method, importance of previous death experience in deciding to become involved with hospice, age, occupation, marital status), yet no significant differences were found on the eight test scores between hospice trainees and non-hospice volunteers.

These three groups had average levels of death anxiety and death threat. They were generally high in sense of

purpose, self-actualization, and death-acceptance. They also had minimal levels of depression or death-attraction. These findings were consistent with those of previous studies (Amenta, 1984; Lafer, 1989). All told the three groups seemed to be very well-adjusted and satisfied with their lives. Several possible reasons may account for the finding of no group differences in test scores.

One obvious reason for the finding of no test differences may be that the chosen groups were too similar. It seems likely that many of the same traits that motivate a person to become involved in Meals-On-Wheels or to support grieving widows also motivate those involved in hospice. Both types of activities involve a considerable time commitment, heavy personal investment, altruism, and empathy. Perhaps these characteristics are significantly related to low death anxiety and positive death attitudes. Since no significant differences in test scores were found, perhaps the only difference between the hospice and non-hospice volunteers was the form in which their personal investment, altruism, or empathy took.

Secondly, more is clearly involved in the decision to become a hospice volunteer than can be measured using any of these inventories. Again, the decision as to where to volunteer is likely to have many components, none of which may be measured by any of these instruments. No attempt was made to measure such things as motivation for volunteering,

values, time availability, or the nature of past exposures to death and dying (positive vs. negative experiences). One can hypothesize that any or all of these may play a larger role in the decision to become a hospice volunteer than does death anxiety.

A third possibility might be that volunteers are determined largely by situational, not personality factors. Those generally inclined to volunteer probably share many characteristics. For example, prior exposure to an organization or previous individual experience may predispose a person toward a certain type of volunteer activity. Personality traits may not be determining factors. In the current study, a relatively large number of hospice volunteers had prior personal experience with death and dying that was influential in their decision to become involved in hospice. Some of the experiences were positive and some were not. Perhaps the non-hospice volunteers would have joined hospice had they been exposed to similar life circumstances.

Vivid examples of how important previous death experiences were for some experienced hospice volunteers were written on a number test packets. Motivation seemed strong in these volunteers regardless of the nature of the death experience encountered. Some volunteers wanted to recreate as fulfilling an experience for others as they themselves had had. Others seemed determined that the

mistakes and regrets they had experienced during their encounter with death not be repeated for others. A majority seemed to find meaning and growth in helping patients and families adjust to life's most difficult transition. Unfortunately, no qualitative analysis was performed on how important previous death experience was in the decision to become hospice volunteers.

It is indeed interesting that none of the eight test scores were effective in discriminating between any of the three, conceivably different, groups (hospice trainees, experienced hospice volunteers, and non-hospice volunteers). It now seems doubtful that any one test would be effective in discriminating between three groups comprised of motivated, active, and fulfilled volunteer trainees and volunteers.

Limitations of the Study

Perhaps the biggest limitation with this study was in the use of the performance ratings. Serious questions about the construct validity of the ratings are raised because of how they were applied in this study. The ratings were based upon a notion of volunteer "performance" that was not behaviorally specified for the supervisors. As such, these ratings may also be measuring a number of traits, including likeability, dependability, empathy, motivation, energy, or altruism.

Another problem with the ratings used in this study was the way in which they were applied. In an effort to ensure a broad range of scores (and avoid a halo effect) an artificial distribution was enforced so that equal numbers of volunteers would be categorized under each rank (approximately 15 per rank). Such a procedure violated the principle of independent measurement and introduced an imposed constraint upon score variability. Whatever the threat of a halo effect might have been, it probably was not as deleterious to this study as the threat inherent in requiring statistical evenness of scores.

Finally, some global measure of values might have yielded significant differences in a number of variables not tested using the present format. Clearly, not enough is currently known about hospice volunteer characteristics to justify a focus primarily on death attitudes. Testing volunteer values may help hospice administrators focus on those specific characteristics most associated with low death anxiety, high sense of purpose, healthy death attitudes, and caregiver performance.

Future Directions

Much research has shown that caregiver characteristics are at the crux of patient and family adjustment when coping with terminal illness (Basile & Stone, 1986-87). The current study was generally unsuccessful in showing that hospice trainees and volunteers can be differentiated from

non-hospice volunteers with respect to death attitudes, sense of purpose, or self-actualization. Nor was there convincing evidence that these factors alone are important factors in their volunteer performance. More sophisticated research in the area of caregiver characteristics should be done.

Research involving hospice volunteers is at an early developmental stage. Few attempts have been made to thoroughly explore caregiver characteristics or to correlate attitudes and beliefs with specific behaviors. The current study also found some evidence that future studies might benefit from using alternative Threat Index scales. It seems likely that continued advances in the use of the Threat Index will be found in the future.

As important as hospice volunteers are in the care of terminally-ill patients and grieving families, efforts to study these special caregivers should become a research priority. Yet, the research needs to be sufficiently sophisticated to address the many components of this difficult field of study. The Threat Index appears able to play a large role in this relatively undeveloped field.

APPENDIX A
PARTICIPANT INFORMED CONSENT

Project Title: The relationship between the actualization and integration of hospice volunteers' and their death attitudes, purpose in life, and performance.

Principal Investigator: Michael Gillaspie, M.S.
Counseling Psychology

Hospice of North Central Florida is interested in the welfare of its volunteers. Your participation in this study will assist hospice administrators in their commitment to volunteer training and development by exploring volunteers' genuine attitudes about themselves and death.

You will be asked to complete four short questionnaires (30-45 minutes) pertaining to your attitudes and feelings about death and dying, as well as a short demographics page. You do not have to answer any question you do not wish to answer and you may withdraw from this study at any time without prejudice. All information will be held confidential through the use of assigned code numbers. No information about specific individuals will be reported.

Participation in a study about death attitudes could result in some discomfort. It is possible that completing these forms may remind you of a recent death of a friend or relative. You may contact the Alachua County Crisis Center or the principal investigator (phone numbers below) for any help you may need. A potential benefit of this study is that it will give volunteers the opportunity to explore their personal views and opinions about death. Any person who participates will have the chance to learn about themselves as a result of this study's findings.

I have read and understand the procedure which has just been presented. I agree to take part in this study and realize that I will not receive money for my participation. Please sign and date the bottom portion of this page. Thank you.

Participant_____ Date_____

Principal Investigator: Michael Gillaspie (904) 334-5328
Alachua County Crisis Center 24 hour phones (904) 376-4444

APPENDIX B
DEMOGRAPHIC INFORMATION

DATE_____

ADDRESS_____

GENDER_____

MARITAL STATUS_____

OCCUPATION_____

HOURS PER WEEK EMPLOYED_____

AGE_____

EDUCATION LEVEL COMPLETED_____

1st - 12th grade = 1 - 12 years

collete/university = 13 - 16 years

advanced/professional degrees = 17 years or more

HOUSEHOLD INCOME (please check appropriate space)

0 - \$9,999 _____

\$10,000 - \$19,999 _____

\$20,000 - \$29,999 _____

\$30,000 - \$39,999 _____

\$40,000 - \$49,999 _____

over \$50,000 _____

DO YOU CONSIDER YOURSELF RELIGIOUS? _____

HOW LONG HAVE YOU BEEN A HOSPICE VOLUNTEER? _____

ABOUT HOW MANY PATIENTS HAVE YOU SERVED? _____

WHAT MOTIVATED YOU TO BECOME A HOSPICE VOLUNTEER?

APPENDIX C
DAS

Answer the following true-false questions:

1. ___ I am very much afraid to die.
2. ___ I feel nervous when I see a funeral.
3. ___ It doesn't make me nervous when people talk about death.
4. ___ I dread to think about having to have an operation.
5. ___ I am not at all afraid to die.
6. ___ I am not particularly afraid of getting cancer.
7. ___ The thought of death never bothers me.
8. ___ I am often distressed by the way time flies so rapidly.
9. ___ I fear dying a painful death.
10. ___ The subject of life after death troubles me greatly.
11. ___ I am really scared of having a heart attack.
12. ___ I often think about how short life really is.
13. ___ I shudder when I hear people talk about a World War III.
14. ___ The sight of a dead body is horrifying to me.
15. ___ I feel that the future holds nothing for me to fear.

Appendix D
PPQ

On each of the next three pages are 40 bipolar dimensions. For each dimension on this page, please circle the side with which you see yourself more closely associated (i.e., do you associate yourself more with the term "sad" or "happy"?)

predictable - random		productive - unproductive
empty - meaningful		learning - not learning
sad - happy		purposeful - not purposeful
personal - impersonal		responsible - not responsible
lack of control - control		bad - good
satisfied - dissatisfied		not caring - caring
relating to - not relating others to others		crazy - healthy personality
pleasure - pain		conforming - not conforming
feels bad - feels good		animate - inanimate
objective - subjective		weak - strong
alive - dead		useful - useless
helping others - being selfish		closed - open
specific - general		peaceful - violent
kind - cruel		freedom - restriction
incompetent - competent		non-existence - existence
insecure - secure		understanding - not understanding
static - changing		sick - healthy
unnatural - natural		stagnation - growth
calm - anxious		abstract - concrete
easy - hard		hope - no hope

PPQ2

On this second page are the same 40 bipolar dimensions. For each dimension on this page, please circle the side with which you would prefer to see yourself more closely associated (i.e., would you prefer to see yourself more with the term "sad" or "happy"?)

predictable - random		productive - unproductive
empty - meaningful		learning - not learning
sad - happy		purposeful - not purposeful
personal - impersonal		responsible - not responsible
lack of control - control		bad - good
satisfied - dissatisfied		not caring - caring
relating to - not relating others to others		crazy - healthy personality
pleasure - pain		conforming - not conforming
feels bad - feels good		animate - inanimate
objective - subjective		weak - strong
alive - dead		useful - useless
helping others - being selfish		closed - open
specific - general		peaceful - violent
kind - cruel		freedom - restriction
incompetent - competent		non-existence - existence
insecure - secure		understanding - not understanding
static - changing		sick - healthy
unnatural - natural		stagnation - growth
calm - anxious		abstract - concrete
easy - hard		hope - no hope

PPQ3

On this final page are the same 40 bipolar dimensions. For each dimension on this page, please circle the side with which you more closely associate your own death; think of your death as if it were to occur suddenly at this time in your life without discomfort; the concern here is with death, not the process of dying.

predictable - random		productive - unproductive
empty - meaningful		learning - not learning
sad - happy		purposeful - not purposeful
personal - impersonal		responsible - not responsible
lack of control - control		bad - good
satisfied - dissatisfied		not caring - caring
relating to - not relating others to others		crazy - healthy personality
pleasure - pain		conforming - not conforming
feels bad - feels good		animate - inanimate
objective - subjective		weak - strong
alive - dead		useful - useless
helping others - being selfish		closed - open
specific - general		peaceful - violent
kind - cruel		freedom - restriction
incompetent - competent		non-existence - existence
insecure - secure		understanding - not understanding
static - changing		sick - healthy
unnatural - natural		stagnation - growth
calm - anxious		abstract - concrete
easy - hard		hope - no hope

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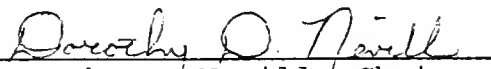
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BIOGRAPHICAL SKETCH


Michael Gillaspie was born in Fremont, Nebraska, on July 22, 1962. He is the second of four children for Harold and Marjean Gillaspie. In 1980, he graduated from Central High School in Omaha, Nebraska, and enrolled at the University of Nebraska-Lincoln in the Fall of 1980. He graduated with honors and was awarded the Bachelor of Arts degree in psychology in 1984.

In 1987, Michael married Amy Collette Thompson and enrolled as a graduate student at the University of Florida. He completed the requirements for the Master of Science degree in counseling psychology in December 1990. He and Amy currently live in Bellevue, Nebraska.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Dorothy D. Nevill, Chair
Professor of Psychology


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Franz Epting
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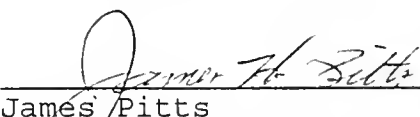
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December 1993



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